

PRODUCT SPECIFICATIONS

Cutoff 45° visual cutoff to lamp and lamp image

Trims Style Die Cast Self Flanged and Flangeless reflectors utilize precision wound double torsion springs for tight, secure fit to ceiling • Flange is same finish as reflector unless optional painted white flange is specified

Socket Medium base porcelain socket with nickel plated copper screw shell.

Lamp One 50W PAR20 or 75W PAR16 lamp max. (See trim for max. lamp rating)

Adjustability Acu-Aim™ precision geared hot-aiming achieves 370° rotation, 40° tilt • Optimized center lamp beam optics translates lamp forward as it is aimed off nadir, ensuring maximum light and low brightness • Black aiming mechanism with shield prevents visibility into fixture and preserves dark aperture • Shield hinges out of way to facilitate maintenance.

Codes/Labels UL and cUL listed for through-branch wiring, damp locations (wet location with approved trims) • IC13SQ rated for direct contact with insulation • Meets energy code Air Leakage requirements per ASTM E283 • Product thermally protected • Union made.

Patented (US Patent 8,038,113) Pro-VI™ Bar Hanger System With locking set screws, permits quick placement of housing within 24" O.C. joists or suspended ceilings • Robust bar eliminates flexing regardless of fixture position • Integral T-bar notch with locking tabs secures housing to suspended ceiling grid • Captive bugle-headed ring shank nail for quick one-step installation • Bar Hanger foot aligns to bottom of construction joist and breaks away for use in suspended ceilings.

Junction Box IC13SQ rated for 4 No. 12 AWG 90° C through branch circuit conductors • TC13SQ rated for 8 No. 12 AWG 90° C through branch circuit conductors • Includes (5) ½", (1) ¾", and (4) Non-metallic sheathed cable knock-outs • Push-In electrical connectors for field connections.

Housing/Mounting Frame Black steel plaster frame and housing painted for visually dark interior • V-Notch in plaster frame aids fixture alignment during installation • Patent Pending Tru-Line™ Adjustment Mechanism featuring +/- ½" translation and +/- 45° aperture rotation aids fixture alignment after installation, prior to drywall.

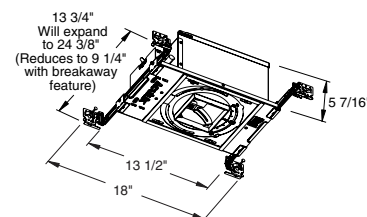
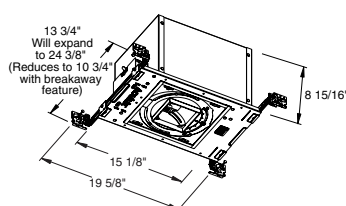
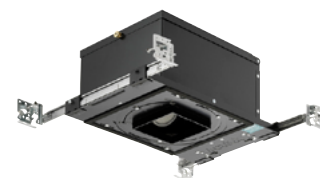
Ceiling Thickness ½" – 2" ceiling

Specifications subject to change without notice.

3" PAR16/PAR20 UNIVERSAL RECESSED ADJUSTABLE/DOWNLIGHT/WALL WASH

PAR16 or PAR20 Halogen

IC13SQ / TC13SQ



IC13SQ

TC13SQ

4 1/8" CEILING CUTOUT
(4 1/4" FOR FLANGELESS)

ORDERING INFORMATION

Example: IC13SQ 3ABV BS WHFM FMA3/087

Series / Housing Style		Option
IC13SQ	3" Aculux Square PAR16/PAR20 IC Air Tight	CP ¹ Chicago Plenum
TC13SQ	3" Aculux Square PAR16/PAR20 Non-IC	

HOUSING INFO

TRIM OPTIONS

Square Trim Style	Reflector Finish	Flange Style / Finish	Environment	Ceiling Installation
<i>ADJUSTABLE ACCENT</i>	BD³ Black Diffuse	<i>SELF FLANGED</i>	WET Wet location	<i>SELF-FLANGED</i>
3SQA Angle-Cut Reflector	CD³ Clear Diffuse	SF³ Flange is same finish as reflector		Ceiling ≤ .875"
3SQABV Adjustable Bevel	W³ White Paint	WHSF White painted flange		CTA3SQ/125 Ceiling 0.875" - 1.25"
3SQAPIN Pinhole, 1 ¼"	WTD³ Wheat Diffuse	BLSF² Black painted flange		CTA3SQ/163 Ceiling 1.25" - 1.625"
<i>DOWNLIGHT</i>	BS² Black Specular	<i>FLANGELESS⁵</i>		CTA3SQ/200 Ceiling 1.625" - 2.00"
3SQD Deep Reflector		FM³ Flangeless		<i>FLANGELESS, GYPSUM</i>
3SQDBV Downlight Bevel		WHFM² Flangeless, White trim		FMA3SQ/087 Ceiling ≤ .875"
3SQDPIN Pinhole, 1 ¼"		BLFM² Flangeless, Black trim		FMA3SQ/125 Ceiling 0.875" - 1.25"
<i>WALL WASH</i>				FMA3SQ/163 Ceiling 1.25" - 1.625"
3SQWW Lensed Wall Wash				<i>FLANGELESS, WOOD/STONE/TILE⁴</i>
				SFM3SQ/100 (B,W) Ceiling ≤ 1.00"
				SFM3SQ/138 (B,W) Ceiling 1.00" - 1.375"
				SFM3SQ/163 (B,W) Ceiling 1.375" - 1.625"

Ordering Notes

¹ CP available on TC13SQ only

² Available on 3SQABV, 3SQAPIN, 3SQDBV, 3SQDPIN only

³ Available for 3SQA, 3SQD, 3SQWW only

⁴ Specify finish : B=Black, W=White

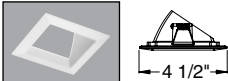
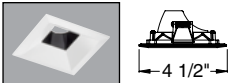
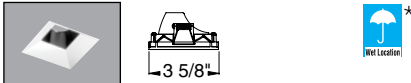
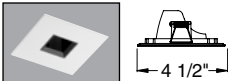
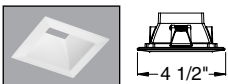
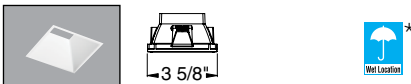
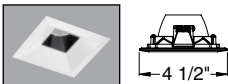
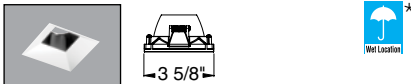
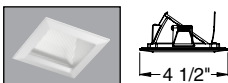
⁵ Must specify flangeless ceiling installation (FMA3SQ or SFM3SQ)

3" PAR16/PA20 UNIVERSAL RECESSED ADJUSTABLE/DOWNLIGHT/WALL WASH

PAR16 or PAR20 Halogen

IC13SQ / TC13SQ

TRIM SELECTION

ADJUSTABLE ACCENT				MAX. LAMP RATING	
3SQA Angle Cut Reflector	 Self-Flanged 4 1/2"	Aperture: 3 1/4"	 Flangeless 3 5/8"		IC13SQ : 60W PAR16 / 50W PAR20 IC13SQ (WET): 45W PAR16 / 50W PAR20 TC13SQ : 75W PAR16 / 50W PAR20 TC13SQ (WET) : 60W PAR16 / 50W PAR20
3SQABV Adjustable Bevel	 Self-Flanged 4 1/2"	Aperture: 1 3/4"	 Flangeless 3 5/8"		IC13SQ : 45W PAR16 / 50W PAR20 TC13SQ : 60W PAR16 / 50W PAR20
3SQAPIN Adjustable Pinhole, 1 1/4"	 Self-Flanged 4 1/2"	Aperture: 1 1/4"	 Flangeless 3 5/8"		IC13SQ : 60W PAR16 / 50W PAR20 IC13SQ (WET): 45W PAR16 / 50W PAR20 TC13SQ : 75W PAR16 / 50W PAR20 TC13SQ (WET) : 60W PAR16 / 50W PAR20
DOWNLIGHT TRIMS					
3SQD Downlight Reflector	 Self-Flanged 4 1/2"	Aperture: 3 1/4"	 Flangeless 3 5/8"		IC13SQ : 60W PAR16 / 50W PAR20 IC13SQ (WET): 45W PAR16 / 50W PAR20 TC13SQ : 75W PAR16 / 50W PAR20 TC13SQ (WET) : 60W PAR16 / 50W PAR20
3SQDBV Downlight Bevel	 Self-Flanged 4 1/2"	Aperture: 1 3/4"	 Flangeless 3 5/8"		IC13SQ : 45W PAR16 / 50W PAR20 TC13SQ : 60W PAR16 / 50W PAR20
3SQDPIN Downlight Pinhole, 1 1/4"	 Self-Flanged 4 1/2"	Aperture: 1 1/4"	 Flangeless 3 5/8"		IC13SQ : 60W PAR16 / 50W PAR20 IC13SQ (WET): 45W PAR16 / 50W PAR20 TC13SQ : 75W PAR16 / 50W PAR20 TC13SQ (WET) : 60W PAR16 / 50W PAR20
WALL WASH					
3SQWW Lensed Wall Wash	 Self-Flanged 4 1/2"	Aperture: 3 1/4"	 Flangeless 3 5/8"		IC13SQ : 45W PAR16 / 50W PAR20 TC13SQ : 60W PAR16 / 50W PAR20
* With WET option					

* With WET option

3" PAR16/PA20 UNIVERSAL RECESSED ADJUSTABLE/DOWNLIGHT/WALL WASH

PAR16 or PAR20 Halogen

IC13SQ / TC13SQ

ACCESSORIES

Cat. #	Description	Cat. #	Description
CGF 200 MPINK	Med. Pink Color Filter	DGF 200 MAGEN	Magenta Dichroic Lens
CGF 200 WRED	Warm Red Color Filter	DGF 200 CYAN	Blue Green Dichroic Lens
CGF 200 DLTBLUE	Daylight Blue Color Filter	DCCF 200 HL4250	Daylight Blue Correction Lens
CGF 200 MBLU	Med. Blue Color Filter	DIFF 200	Diffuse Spread Lens
CGF 200 MAMB	Med. Amber Color Filter	SOLITE 200	Uniformity Lens
CGF 200 MGRN	Med. Green Color Filter	UVF 200	UV Filter Lens
DGF 200 DRED	Red Dichroic Lens	PRISM 200	Prismatic Lens
DGF 200 MGRN	Med. Green Dichroic Lens	LSPREAD 200	Linear Spread Lens
DGF 200 MBLU	Med. Blue Dichroic Lens	HCLBL 200	Hexcell Louver
DGF 200 DYEL	Yellow Dichroic Lens		

To order, specify catalog number.

3" PAR16/PA20 UNIVERSAL RECESSED ADJUSTABLE/DOWNLIGHT/WALL WASH

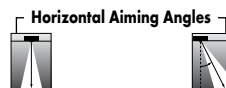
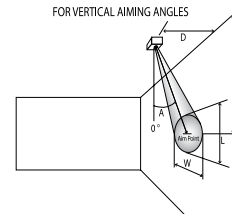
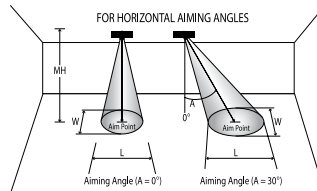
PAR16 or PAR20 Halogen

IC13SQ / TC13SQ

PHOTOMETRICS

CBCP • Centerbeam candlepower
FC • Footcandles at beam center (aim point)

In vertical aiming applications, aim point (X) is determined by dividing distance from the wall (D) by the tangent of the desired aim angle (A) (0.5774 for 30°, 1.0 for 45°).



Lamp	Beam Type	Beam Spread°	Rated Life	CBCP	0°				30°				30°				40°			
					MH	FC	L	W	FC	L	W	D	FC	X	L	W	FC	X	L	W
50W PAR20 Halogen	SP	10°	2500	4600	6	128	1.0	1.0	83	1.4	1.2	2	144	3.5	5.5	2.1	305	2.4	0.9	0.5
					8	72	1.4	1.4	47	1.9	1.6	3	64	5.0	2.1	1.0	136	3.6	1.3	0.8
					10	46	1.7	1.7	30	2.3	2.0	4	36	6.9	2.9	1.4	76	4.8	1.7	1.1
					12	32	2.1	2.1	21	2.8	2.4	5	23	8.7	3.6	1.7	49	6.0	2.1	1.4
					14	24	2.4	2.4	15	3.3	2.8	6	16	10.4	4.3	2.1	34	7.2	2.6	1.6
	FL	30°	2500	1200	4	75	2.1	2.1	49	2.9	2.5	2	38	3.5	5.5	2.1	80	2.4	2.9	1.7
					5	48	2.7	2.7	31	3.7	3.1	3	17	5.2	8.2	3.2	35	3.6	4.3	2.5
					6	33	3.2	3.2	22	4.4	3.7	4	9	6.9	10.9	4.3	20	4.8	5.8	3.3
					7	25	3.8	3.8	16	5.1	4.3	5	6	8.7	13.7	5.4	13	6.0	7.2	4.2
					8	19	4.3	4.3	12	5.9	5.0	6	4	10.4	16.4	6.4	9	7.2	8.7	5.0
45W PAR16 Halogen	NSP	10°	2000	5000	6	139	1.0	1.0	90	1.4	1.2	2	156	3.5	1.4	0.7	332	2.4	0.9	0.5
					8	78	1.4	1.4	51	1.9	1.6	3	69	5.2	2.1	1.0	148	3.6	1.3	0.8
					10	50	1.7	1.7	32	2.3	2.0	4	39	6.9	2.9	1.4	83	4.8	1.7	1.1
					12	35	2.1	2.1	23	2.8	2.4	5	25	8.7	3.6	1.7	53	6.0	2.1	1.4
					14	26	2.4	2.4	17	3.3	2.8	6	17	10.4	4.3	2.1	37	7.2	2.6	1.6
	NFL	27°	2000	1400	3	156	1.4	1.4	101	2.0	1.7	1	175	1.7	2.3	1.0	372	1.2	1.4	0.8
					5	56	2.4	2.4	36	3.3	2.8	2	44	3.5	4.6	1.9	93	2.4	2.9	1.7
					7	29	3.4	3.4	19	4.6	3.9	3	19	5.2	7.0	2.9	41	3.6	4.3	2.5
					9	17	4.3	4.3	11	5.9	5.0	4	11	6.9	9.3	3.8	23	4.8	5.8	3.3
					11	12	5.3	5.3	8	7.2	6.1	5	7	8.7	11.6	4.8	15	6.0	7.2	4.2
60W PAR16 Halogen	NSP	10°	2000	5400	6	150	1.0	1.0	97	1.4	1.2	2	169	3.5	1.4	0.7	359	2.4	0.9	0.5
					8	84	1.4	1.4	55	1.9	1.6	3	75	5.2	2.1	1.0	159	3.6	1.3	0.8
					10	54	1.7	1.7	35	2.3	2.0	4	42	6.9	2.9	1.4	90	4.8	1.7	1.1
					12	38	2.1	2.1	24	2.8	2.4	5	27	8.7	3.6	1.7	57	6.0	2.1	1.4
					14	28	2.4	2.4	18	3.3	2.8	6	19	10.4	4.3	2.1	40	7.2	2.6	1.6
	NFL	30°	2000	1550	4	97	2.1	2.1	63	2.9	2.5	2	48	3.5	5.5	2.1	103	2.4	2.9	1.7
					6	43	3.2	3.2	28	4.4	3.7	3	22	5.2	8.2	3.2	46	3.6	4.3	2.5
					8	24	4.3	4.3	16	5.9	5.0	4	12	6.9	10.9	4.3	26	4.8	5.8	3.3
					10	16	5.4	5.4	10	7.3	6.2	5	8	8.7	13.7	5.4	16	6.0	7.2	4.2
					12	11	6.4	6.4	7	8.8	7.4	6	5	10.4	16.4	6.4	11	7.2	8.7	5.0
75W PAR16 Halogen	NSP	10°	2000	7500	6	208	1.0	1.0	135	1.4	1.2	2	234	3.5	1.4	0.7	498	2.4	0.9	0.5
					8	117	1.4	1.4	76	1.9	1.6	3	104	5.2	2.1	1.0	221	3.6	1.3	0.8
					10	75	1.7	1.7	49	2.3	2.0	4	59	6.9	2.9	1.4	124	4.8	1.7	1.1
					12	52	2.1	2.1	34	2.8	2.4	5	38	8.7	3.6	1.7	80	6.0	2.1	1.4
					14	38	2.4	2.4	25	3.3	2.8	6	26	10.4	4.3	2.1	55	7.2	2.6	1.6
	NFL	30°	2000	1900	4	119	2.1	2.1	77	2.9	2.5	2	59	3.5	5.5	2.1	126	2.4	2.9	1.7
					6	53	3.2	3.2	34	4.4	3.7	3	26	5.2	8.2	3.2	56	3.6	4.3	2.5
					8	30	4.3	4.3	19	5.9	5.0	4	15	6.9	10.9	4.3	32	4.8	5.8	3.3
					10	19	5.4	5.4	12	7.3	6.2	5	10	8.7	13.7	5.4	20	6.0	7.2	4.2
					12	13	6.4	6.4	9	8.8	7.4	6	7	10.4	16.4	6.4	14	7.2	8.7	5.0

The beam spread in degrees and the beam "L" and "W" in the following tables are computed at 50% of centerbeam candlepower and represent areas of "effective illumination."

3SQ Downlight Reflector



Self-Flanged

Aperture: 3 1/4"



Flangeless



3" PAR16/PA20 UNIVERSAL RECESSED DOWNLIGHT

PAR16 or PAR20 Halogen

IC13SQ / TC13SQ with 3SQD Trim

PHOTOMETRICS

PHOTOMETRIC REPORT

Catalog Number: IC13SQ 3SQD CD SF

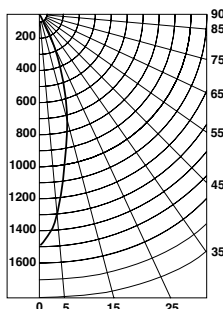
Test Number: PT02100301

Total Luminaire Efficiency: 73.2%

Luminaire Spacing Criteria: 0.5

Luminaire: Diffuse finish, square open downlight trim.

Lamps: One 60PAR16/HAL/NFL30, rated at 650 total lumens.



Candlepower Distribution

Angle	Candela	Lumens
0°	1463	
5°	1344	128
15°	736	209
25°	258	120
35°	27	17
45°	3	2
55°	0	0
65°	0	0
75°	0	0
85°	0	0

Initial Footcandles

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	40.6	18.3	3.2'
7'	29.9	13.4	3.8'
8'	22.9	10.3	4.3'
9'	18.1	8.1	4.8'
10'	14.6	6.6	5.4'
11'	12.1	5.4	5.9'
12'	10.2	4.6	6.5'
13'	8.7	3.9	7.0'
14'	7.5	3.4	7.5'
15'	6.5	2.9	8.1'

Luminance Data

Ang in Deg	Footlamberts	Candela/M²
45	190	652
55	0	0
65	0	0
75	0	0
85	0	0

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30°	456	70.2	95.9
0-40°	473	72.8	99.5
0-60°	476	73.2	100.0
0-90°	476	73.2	100.0
90-180°	0	0.0	0.0
0-180°	476	73.2	100.0

AVERAGE INITIAL FOOTCANDLES

Reflectances: 80% Ceiling, 50% Walls, 20% Floors

Luminaire Spacing	RCR1	RCR3	RCR5
4' x 4'	33	30	28
5' x 5'	21	20	18
6' x 6'	15	14	12
7' x 7'	12	11	10
8' x 8'	9	9	8
9' x 9'	7	7	6
10' x 10'	5	5	4
12' x 12'	4	3	3

COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)

Effective Floor Reflectance 20%

PCC	80				70				50				30				10				0
PW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0			
0	87	87	87	87	85	85	85	85	81	81	81	78	78	78	75	75	75	73			
1	84	82	81	80	82	81	80	78	78	77	76	75	74	74	73	72	72	70			
2	81	78	76	74	80	77	75	73	75	73	72	73	71	70	71	70	69	68			
3	78	75	72	70	77	74	71	69	72	70	68	70	68	67	69	67	66	65			
4	76	71	68	66	74	71	68	66	69	67	65	68	66	64	67	65	63	63			
5	73	68	65	63	72	68	65	63	67	64	62	66	63	62	64	63	61	60			
6	71	66	63	60	70	65	62	60	64	62	60	63	61	59	62	60	59	58			
7	68	63	60	58	68	63	60	58	62	59	57	61	59	57	61	58	57	56			
8	66	61	58	56	66	61	58	55	60	57	55	59	57	55	59	56	55	54			
9	64	59	56	54	64	59	56	53	58	55	53	57	55	53	57	55	53	52			
10	62	57	54	52	62	57	54	52	56	53	52	56	53	51	55	53	51	51			

PHOTOMETRIC REPORT

Catalog Number: TC13SQ 3SQD CD SF

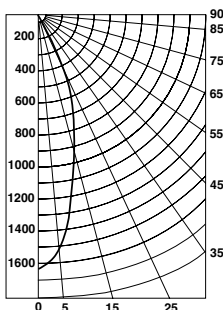
Test Number: PT02100404

Total Luminaire Efficiency: 71.5%

Luminaire Spacing Criteria: 0.54

Luminaire: Diffuse finish, square downlight trim. Open aperture.

Lamps: One 75PAR16/HAL/NFL30, rated at 900 total lumens.



Candlepower Distribution

Angle	Candela	Lumens
0°	1643	
5°	1536	147
15°	925	262
25°	437	202
35°	41	26
45°	5	4
55°	3	2
65°	0	0
75°	0	0
85°	0	0

Initial Footcandles

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	45.6	19.9	3.7'
7'	33.5	14.6	4.3'
8'	25.7	11.2	4.9'
9'	20.3	8.9	5.5'
10'	16.4	7.2	6.2'
11'	13.6	5.9	6.8'
12'	11.4	5.0	7.4'
13'	9.7	4.2	8.0'
14'	8.4	3.7	8.6'
15'	7.3	3.2	9.2'

Luminance Data

Ang in Deg	Footlamberts	Candela/M²
45	327	1121
55	205	702
65	0	0
75	0	0
85	0	0

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30°	611	67.9	94.9
0-40°	637	70.8	99.0
0-60°	644	71.5	100.0
0-90°	644	71.5	100.0
90-180°	0	0.0	0.0
0-180°	644	71.5	100.0

AVERAGE INITIAL FOOTCANDLES

Reflectances: 80% Ceiling, 50% Walls, 20% Floors

Luminaire Spacing	RCR1	RCR3	RCR5
4' x 4'	45	41	37
5' x 5'	29	26	24
6' x 6'	20	18	17
7' x 7'	16	15	13
8' x 8'	13	12	11
9' x 9'	10	9	8
10' x 10'	7	6	6
12' x 12'	5	5	4

COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)

Effective Floor Reflectance 20%

PCC	80				70				50				30				10				0
PW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0			
0	85	85	85	85	83	83	83	83	79	79	79	76	76	76	73	73	73	72			
1	82	80	79	77	80	79	77	76	76	75	74	73	72	72	71	70	70	68			
2	79	76	74	72	77	75	73	71	73	71	69	71	69	68	69	68	67	65			
3	76	72	69	67	75	71	69	67	70	67	66	68	66	65	66	65	64	63			
4	73	69	66	63	72	68	65	63	67	64	62	65	63	62	64	62	61	60			
5	71	66	62	60	69	65	62	60	64	61	59	63	61	59	62	60	58	57			
6	68	63	60	57	67	62	59	57	61	59	57	61	58	56	60	58	56	55			
7	66	60	57	55	65	60	57	54	59	56	54	58	56	54	58	55	54	53			
8	63	58	55	52	63	58	54	52	57	54	52	56	54	52	56	53	52	51			
9	61	56	52	50	61	55	52	50	55	52	50	54	52	50	54	51	50	49			
10	59	54	50	48	59	53	50	48	53	50	48	52	50	48	52	50	48	47			

3SQDBV Downlight Bevel



Self-Flanged



Aperture: 1 3/4"



Flangeless

3" PAR16/PA20 UNIVERSAL RECESSED DOWNLIGHT

PAR16 or PAR20 Halogen

IC13SQ / TC13SQ with 3SQDBV Trim

PHOTOMETRICS

PHOTOMETRIC REPORT

Catalog Number: IC13SQ 3SQDBV BS WHSF

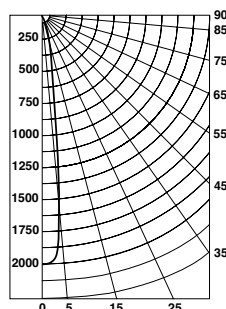
Test Number: PT02100304

Total Luminaire Efficiency: 60.4%

Luminaire Spacing Criteria: 0.32

Luminaire: 1 3/4" square regressed pinhole trim. Clear glass lens.

Lamps: One 45PAR16/SP10, rated at 420 total lumens.



Candlepower Distribution (Candelas)

Angle	Candela	Lumens
0°	2005	
5°	1543	147
15°	238	68
25°	65	30
35°	7	5
45°	6	4
55°	0	0
65°	0	0
75°	0	0
85°	0	0

Initial Footcandles

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	55.7	27.3	1.4'
7'	40.9	20.0	1.6'
8'	31.3	15.3	1.9'
9'	24.8	12.1	2.1'
10'	20.0	9.8	2.3'
11'	16.6	8.1	2.6'
12'	13.9	6.8	2.8'
13'	11.9	5.8	3.0'
14'	10.2	5.0	3.3'
15'	8.9	4.4	3.5'

Luminance Data

Ang in Deg	Footlamberts	Candela/M ²
45	1204	4124
55	0	0
65	0	0
75	0	0
85	0	0

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30°	245	58.3	96.4
0-40°	249	59.4	98.2
0-60°	254	60.4	100.0
0-90°	254	60.4	100.0
90-180°	0	0.0	0.0
0-180°	254	60.4	100.0

AVERAGE INITIAL FOOTCANDLES

Reflectances: 80% Ceiling, 50% Walls, 20% Floors

Luminaire	Room Cavity Ratio		
Spacing	RCR1	RCR3	RCR5
4' x 4'	18	17	16
5' x 5'	12	11	10
6' x 6'	8	7	7
7' x 7'	7	6	6
8' x 8'	5	5	4
9' x 9'	4	4	3
10' x 10'	3	3	3
12' x 12'	2	2	2

COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)

Effective Floor Reflectance 20%

PCC	80				70				50				30				10				0
PW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0			
0	72	72	72	72	70	70	70	70	67	67	67	64	64	64	62	62	62	60			
1	70	69	68	67	68	67	67	66	65	64	64	63	62	62	61	60	60	59			
2	68	66	64	63	67	65	64	62	63	62	61	61	61	60	60	59	59	58			
3	66	64	62	60	65	63	61	60	61	60	59	60	59	58	59	58	57	56			
4	65	62	60	58	64	61	59	58	60	58	57	59	58	57	58	57	56	55			
5	63	60	58	56	62	60	58	56	59	57	56	58	56	55	57	56	55	54			
6	62	59	56	55	61	58	56	55	57	56	54	57	55	54	56	55	54	53			
7	60	57	55	54	60	57	55	53	56	54	53	56	54	53	55	54	53	52			
8	59	56	54	52	59	56	54	52	55	53	52	55	53	52	54	53	52	51			
9	58	55	53	51	58	55	53	51	54	52	51	54	52	51	53	52	51	50			
10	57	54	52	50	57	54	52	50	53	51	50	53	51	50	53	51	50	50			

PHOTOMETRIC REPORT

Catalog Number: TC13SQ 3SQDBV BS WHSF

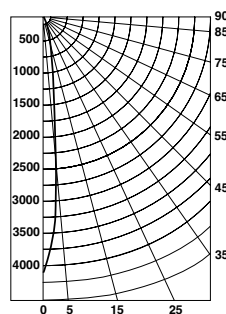
Test Number: PT02100503

Total Luminaire Efficiency: 63.3%

Luminaire Spacing Criteria: 0.23

Luminaire: 1 3/4" square regressed pinhole trim. Open aperture.

Lamps: One 60PAR16/HAL/NSP10, rated at 650 total lumens.



Candlepower Distribution (Candelas)

Angle	Candela	Lumens
0°	4195	
5°	2407	230
15°	452	128
25°	110	51
35°	4	3
45°	0	0
55°	0	0
65°	0	0
75°	0	0
85°	0	0

Initial Footcandles

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	116.5	57.4	1.2'
7'	85.6	42.2	1.4'
8'	65.5	32.3	1.6'
9'	51.8	25.5	1.8'
10'	41.9	20.7	2.0'
11'	34.7	17.1	2.1'
12'	29.1	14.4	2.3'
13'	24.8	12.2	2.5'
14'	21.4	10.5	2.7'
15'	18.6	9.2	2.9'

Luminance Data

Ang in Deg	Footlamberts	Candela/M ²
45	0	0
55	0	0
65	0	0
75	0	0
85	0	0

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30°	409	62.9	99.3
0-40°	411	63.3	100.0
0-60°	411	63.3	100.0
0-90°	411	63.3	100.0
90-180°	0	0.0	0.0
0-180°	411	63.3	100.0

AVERAGE INITIAL FOOTCANDLES

Reflectances: 80% Ceiling, 50% Walls, 20% Floors

Luminaire	Room Cavity Ratio		
Spacing	RCR1	RCR3	RCR5
4' x 4'	29	27	26
5' x 5'	19	17	16
6' x 6'	13	12	11
7' x 7'	11	10	9
8' x 8'	8	8	7
9' x 9'	6	6	6
10' x 10'	5	4	4
12' x 12'	3	3	3

COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)

Effective Floor Reflectance 20%

PCC	80				70				50				30				10				0
PW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0			
0	75	75	75	75	74	74	74	74	70	70	70	67	67	67	65	65	65	63			
1	73	72	71	70	72	71	70	69	68	67	67	66	65	65	64	63	63	62			
2	71	69	68	66	70	68	67	65	66	65	64	64	64	63	63	62	61	61			
3	69	67	65	63	68	66	64	63	65	63	62	63	62	61	62	61	60	59			
4	68	65	63	61	67	64	62	61	63	61	60	62	61	60	61	60	59	58			
5	66	63	61	59	65	63	61	59	62	60	59	61	59	58	60	59	58	57			
6	65	62	59	58	64	61	59	58	60	59	57	60	58	57	59	58	57	56			
7	64	60	58	56	63	60	58	56	59	57	56	59	57	56	58	57	56	55			
8	62	59	57	55	62	59	57	55	58	56	55	58	56	55	57	56	55	54			
9	61	58	56	54	61	57	55	54	57	55	54	57	55	54	56	55	54	53			
10	60	57	55	53	60	56	54	53	56	54	53	56	54	53	55	54	53	52			

3SQDPIN Downlight Pinhole, 1 1/4"

Aperture: 1 1/4"



Self-Flanged



Flangeless



3 5/8"

3" PAR16/PA20 UNIVERSAL RECESSED DOWNLIGHT

PAR16 or PAR20 Halogen

IC13SQ / TC13SQ with 3SQDPIN Trim

PHOTOMETRICS

PHOTOMETRIC REPORT

Catalog Number: IC13SQ 3SQDPIN BS WHSF

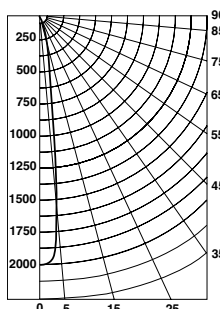
Test Number: PTO2100304

Total Luminaire Efficiency: 60.4%

Luminaire Spacing Criteria: 0.32

Luminaire: 1 1/4" square pinhole trim.

Lamps: One 45PAR16/SP10, rated at 420 total lumens.



Candlepower Distribution (Candelas)

Angle	Candela	Lumens
0°	2005	
5°	1543	147
15°	238	68
25°	65	30
35°	7	5
45°	6	4
55°	0	0
65°	0	0
75°	0	0
85°	0	0

Initial Footcandles

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	55.7	27.3	1.4'
7'	40.9	20.0	1.6'
8'	31.3	15.3	1.9'
9'	24.8	12.1	2.1'
10'	20.0	9.8	2.3'
11'	16.6	8.1	2.6'
12'	13.9	6.8	2.8'
13'	11.9	5.8	3.0'
14'	10.2	5.0	3.3'
15'	8.9	4.4	3.5'

Luminance Data

Ang in Deg	Footlamberts	Candela/M ²
45	1204	4124
55	0	0
65	0	0
75	0	0
85	0	0

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30°	245	58.3	96.4
0-40°	249	59.4	98.2
0-60°	254	60.4	100.0
0-90°	254	60.4	100.0
90-180°	0	0.0	0.0
0-180°	254	60.4	100.0

AVERAGE INITIAL FOOTCANDLES

Reflectances: 80% Ceiling, 50% Walls, 20% Floors

Luminaire Spacing	RCR1	Room Cavity Ratio RCR3	RCR5
4' x 4'	18	17	16
5' x 5'	12	11	10
6' x 6'	8	7	7
7' x 7'	7	6	6
8' x 8'	5	5	4
9' x 9'	4	4	3
10' x 10'	3	3	3
12' x 12'	2	2	2

COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)

Effective Floor Reflectance 20%

PCC	80				70				50				30				10				0
PW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0			
0	72	72	72	72	70	70	70	70	67	67	67	64	64	64	62	62	62	60			
1	70	69	68	67	68	67	67	66	65	64	64	63	62	62	61	60	60	59			
2	68	66	64	63	67	65	64	62	63	62	61	61	61	60	60	59	59	58			
3	66	64	62	60	65	63	61	60	61	60	59	60	59	58	59	58	57	56			
4	65	62	60	58	64	61	59	58	60	58	57	59	58	57	58	57	56	55			
5	63	60	58	56	62	60	58	56	59	57	56	58	56	55	57	56	55	54			
6	62	59	56	55	61	58	56	55	57	56	54	57	55	54	56	55	54	53			
7	60	57	55	54	60	57	55	53	56	54	53	56	54	53	55	54	53	52			
8	59	56	54	52	59	56	54	52	55	53	52	55	53	52	54	53	52	51			
9	58	55	53	51	58	55	53	51	54	52	51	54	52	51	53	52	51	50			
10	57	54	52	50	57	54	52	50	53	51	50	53	51	50	53	51	50	50			

PHOTOMETRIC REPORT

Catalog Number: TC13SQ 3SQDPIN BS WHSF

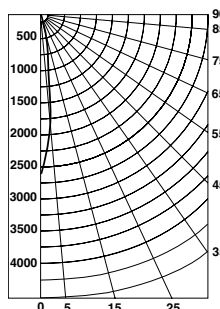
Test Number: PT11110902

Total Luminaire Efficiency: 41.6%

Luminaire Spacing Criteria: 0.3

Luminaire: 1 1/4" square pinhole trim. Stippled Uniformity lens.

Lamps: One 75PAR16/CAP/NSP10, rated at 900 total lumens.



Candlepower Distribution (Candelas)

Angle	Candela	Lumens
0°	2626	
5°	1818	176
15°	487	152
25°	64	41
35°	4	5
45°	0	0
55°	0	0
65°	0	0
75°	0	0
85°	0	0

Initial Footcandles

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	72.9	36.5	1.7'
7'	53.6	26.8	1.9'
8'	41.0	20.5	2.2'
9'	32.4	16.2	2.5'
10'	26.3	13.1	2.8'
11'	21.7	10.9	3.1'
12'	18.2	9.1	3.3'
13'	15.5	7.8	3.6'
14'	13.4	6.7	3.9'
15'	11.7	5.8	4.2'

Luminance Data

Ang in Deg	Footlamberts	Candela/M ²
45	0	0
55	0	0
65	0	0
75	0	0
85	0	0

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30°	370	41.1	98.7
0-40°	374	41.6	100.0
0-60°	374	41.6	100.0
0-90°	374	41.6	100.0
90-180°	0	0.0	0.0
0-180°	374	41.6	100.0

AVERAGE INITIAL FOOTCANDLES

Reflectances: 80% Ceiling, 50% Walls, 20% Floors

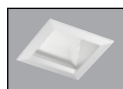
Luminaire Spacing	RCR1	Room Cavity Ratio RCR3	RCR5
4' x 4'	26	25	23
5' x 5'	17	16	15
6' x 6'	12	11	10
7' x 7'	10	9	8
8' x 8'	8	7	7
9' x 9'	6	5	5
10' x 10'	4	4	4
12' x 12'	3	3	3

COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)

Effective Floor Reflectance 20%

PCC	80				70				50				30				10				0
PW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0			
0	50	50	50	50	48	48	48	48	46	46	46	44	44	44	42	42	42	42			
1	48	47	46	46	47	46	46	45	45	44	44	43	43	42	42	42	41	41			
2	47	45	44	43	46	45	44	43	43	43	42	42	42	41	41	41	40	40			
3	45	44	42	41	45	43	42	41	42	41	40	41	40	40	40	40	39	39			
4	44	42	41	40	44	42	40	39	41	40	39	40	39	39	40	39	38	38			
5	43	41	39	38	43	41	39	38	40	39	38	39	38	38	39	38	37	37			
6	42	40	38	37	42	40	38	37	39	38	37	39	37	37	38	37	36	36			
7	41	39	37	36	41	39	37	36	38	37	36	38	37	36	37	36	36	35			
8	40	38	36	35	40	38	36	35	37	36	35	37	36	35	37	36	35	35			
9	39	37	36	35	39	37	35	35	37	35	34	36	35	34	36	35	34	34			
10	39	36	35	34	38	36	35	34	36	35	34	36	34	34	35	34	34	33			

3SQWW Lensed Wall Wash



Self-Flanged



Aperture: 3 1/4"



Flangeless



3" PAR16/PA20 UNIVERSAL RECESSED DOWNLIGHT

PAR16 or PAR20 Halogen

IC13SQ / TC13SQ with 3SQWW Trim

PHOTOMETRICS

PHOTOMETRIC REPORT

Catalog Number: IC13SQ 3SQWW CD SF

Test Number: PT021003003

Total Luminaire Efficiency: 55.9%

Luminaire Spacing Criteria: .58

Luminaire: Haze finish, lensed wall wash.

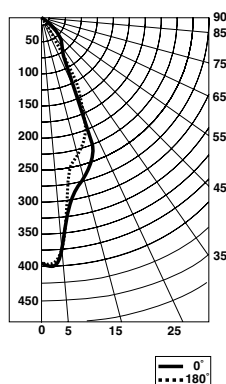
Lamps: One 45PAR16/FL27

Luminance Data

Ang in Deg	Footlamberts	Candela/M ²
45	1264	4332
55	311	1064
65	0	0
75	0	0
85	0	0

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30°	165	39.4	70.4
0-40°	199	47.3	84.6
0-60°	230	54.8	97.9
0-90°	235	55.9	100
90-180°	0	0	0
0-180°	235	55.9	100



Candlepower Distribution (Candelas)

Degrees Vertical	0° Wall Wash	180° Downlight
0°	384	384
5°	350	374
15°	228	200
25°	123	128
35°	73	42
45°	54	21
55°	27	4
65°	14	0
75°	7	0
85°	0	0

Footcandles on Wall from Multiple Fixtures

Fixture Distance to Wall	18"						24"					
Fixture Centers (spacing)	18"	18"	18"	18"	18"	18"	24"	24"	24"	24"	24"	24"
1'	8	7	8	7	4	7	4	4	4	4	3	4
2'	11	10	11	8	7	8	8	8	8	6	6	6
3'	8	8	8	6	6	6	7	7	7	5	5	5
4'	8	7	8	6	6	6	6	6	6	4	5	4
5'	6	6	6	4	4	4	6	6	6	4	4	4
6'	4	5	4	3	3	4	5	5	5	4	4	4
7'	3	4	3	3	3	3	4	4	4	3	3	3
8'	3	3	3	2	2	2	3	3	3	3	3	3
9'	3	3	3	2	2	2	3	3	3	2	2	2

*Multipliers: Gold - 0.9, Black - 0.7, Haze - 0.95

*Note: Multipliers are provided for estimating purposes only.
Use IES photometric files for precise photometric information.

PHOTOMETRIC REPORT

Catalog Number: TC13SQ 3SQWW CD SF

Test Number: PT02100502

Total Luminaire Efficiency: 58.4%

Luminaire Spacing Criteria: 0.82

Luminaire: Haze finish, lensed wall wash.

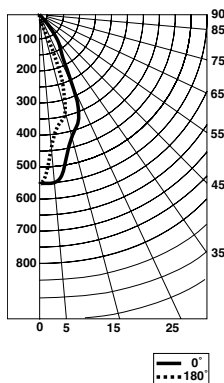
Lamps: One 60PAR16/HAL/NFL30

Luminance Data

Ang in Deg	Footlamberts	Candela/M ²
45	1778	6093
55	391	1341
65	0	0
75	0	0
85	0	0

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30°	263	40.4	69.3
0-40°	321	49.4	84.7
0-60°	371	57.0	97.7
0-90°	379	58.4	100.0
90-180°	0	0	0
0-180°	379	58.4	100.0



Candlepower Distribution (Candelas)

Degrees Vertical	0° Wall Wash	180° Downlight
0°	520	520
5°	538	446
15°	404	315
25°	298	150
35°	117	75
45°	84	29
55°	44	5
65°	20	0
75°	11	0
85°	0	0

Footcandles on Wall from Multiple Fixtures

Fixture Distance to Wall	18"						24"					
Fixture Centers (spacing)	18"	18"	18"	18"	18"	18"	24"	24"	24"	24"	24"	24"
1'	14	11	14	12	6	12	6	6	6	5	4	5
2'	17	16	17	13	12	13	13	12	13	10	9	10
3'	18	17	18	14	12	14	12	13	12	10	9	10
4'	15	15	15	11	11	11	13	13	13	10	10	10
5'	11	12	11	8	9	8	12	12	12	9	9	9
6'	9	9	9	6	7	6	10	10	10	8	8	8
7'	7	7	7	5	5	5	8	8	8	6	6	6
8'	6	6	6	4	4	4	7	7	7	5	5	5
9'	5	5	5	4	4	4	6	6	6	4	4	4

*Multipliers: Gold - 0.9, Black - 0.7, Haze - 0.95

*Note: Multipliers are provided for estimating purposes only.
Use IES photometric files for precise photometric information.