

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: CORELITE

Report Number: P853762

Luminaire Tested: SQ2-FA-050U-125D-935-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853762
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-11)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-FA-050U-125D-935-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1250 LUMENS PER FOOT
UPLIGHT 500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

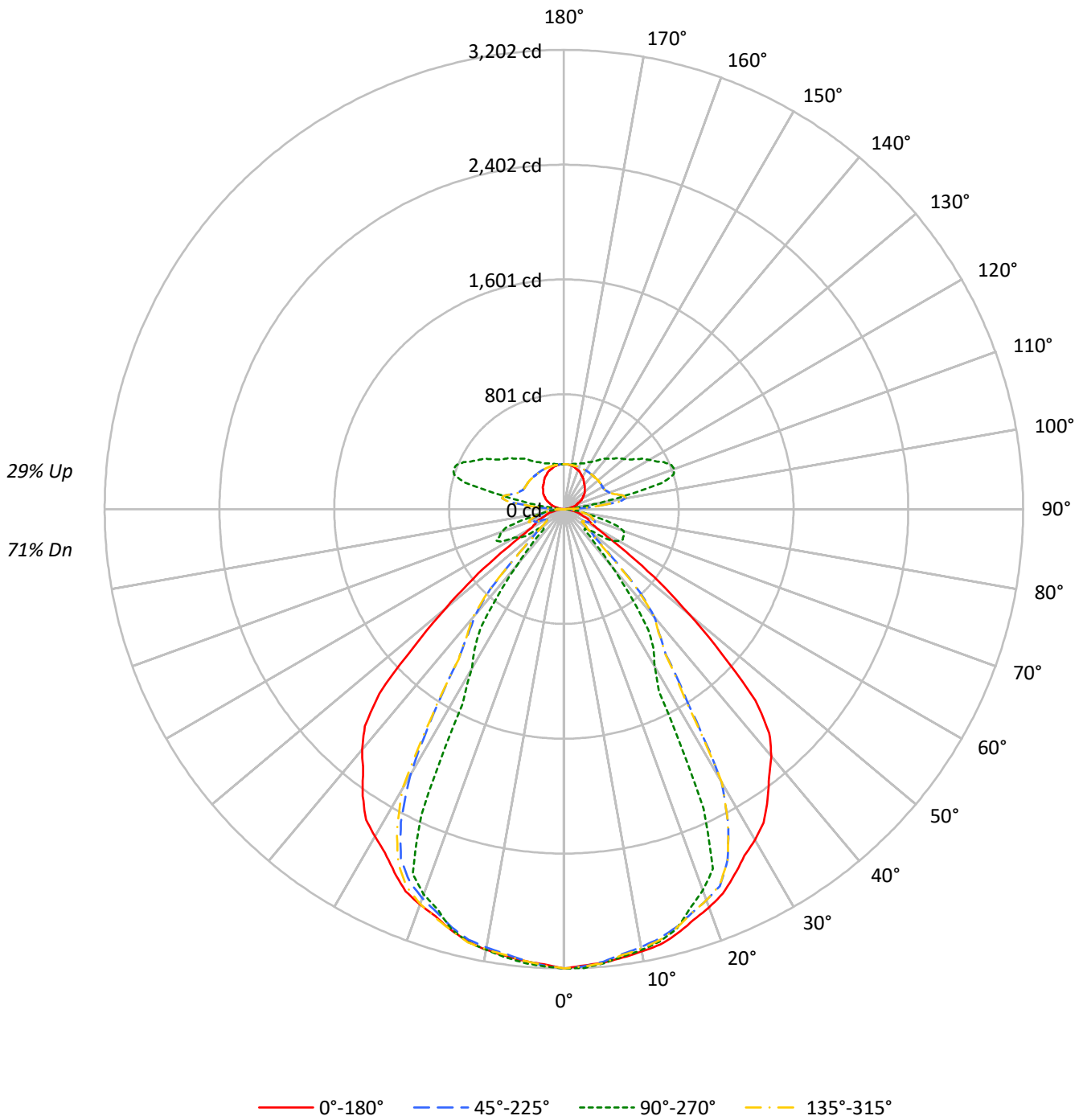
Lumens per Lamp: N/A
Luminaire Lumens: 6627.1 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 64
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20			
RC	80				70				50				30				10		0	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	112	112	112	112	106	106	106	106	95	95	95	84	84	84	75	75	75	71		
1	104	100	96	93	98	95	92	89	85	83	81	77	75	73	69	67	66	62		
2	96	89	84	79	91	85	80	76	77	73	70	70	67	64	63	61	59	55		
3	89	81	74	69	84	77	71	66	70	65	61	63	60	57	57	55	52	49		
4	83	73	66	60	78	70	63	58	64	59	55	58	54	51	53	50	47	44		
5	77	66	59	54	73	64	57	52	58	53	49	54	49	46	49	46	43	40		
6	72	61	53	48	68	58	52	47	54	48	44	50	45	42	45	42	39	37		
7	67	56	49	43	64	54	47	42	50	44	40	46	41	38	42	39	36	34		
8	63	52	44	40	60	50	43	39	46	41	37	43	38	35	40	36	33	31		
9	59	48	41	36	57	46	40	35	43	38	34	40	35	32	37	33	30	29		
10	56	45	38	33	53	43	37	33	40	35	31	37	33	30	35	31	28	27		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	51705	51705	51705	51705
5°	51433	51511	51237	51472
10°	51354	51155	51155	51155
15°	51188	50663	50783	50663
20°	50790	48632	50417	49089
25°	50122	41046	49779	41906
30°	49663	23549	49122	23864
35°	48791	20231	48172	19945
40°	47440	10638	46116	10536
45°	43124	4576	41580	4576
50°	28452	5521	26995	5157
55°	15907	10199	15091	9244
60°	8580	14350	8422	12868
65°	7564	17436	7935	19836
70°	7067	20866	6727	22003
75°	6631	17929	6781	18534
80°	5616	12803	5616	13473
85°	4928	7151	4483	8503

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 43124 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	301.4	4.5
10°-20°	855.0	12.9
20°-30°	1165.7	17.6
30°-40°	979.6	14.8
40°-50°	556.4	8.4
50°-60°	295.2	4.5
60°-70°	271.8	4.1
70°-80°	199.6	3.0
80°-90°	52.5	0.8
90°-100°	125.1	1.9
100°-110°	396.7	6.0
110°-120°	389.0	5.9
120°-130°	316.5	4.8
130°-140°	258.1	3.9
140°-150°	201.2	3.0
150°-160°	145.0	2.2
160°-170°	88.6	1.3
170°-180°	29.9	0.5
0°-30°	2322.0	35.0
0°-40°	3301.7	49.8
0°-60°	4153.3	62.7
0°-90°	4677.1	70.6
90°-120°	910.7	13.7
90°-150°	1686.5	25.4
90°-180°	1950.0	29.4
0°-180°	6627.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3202	3202	3202	3202	3202	
5°	3173	3178	3161	3176	3173	302
15°	3062	3031	3038	3031	3062	863
25°	2814	2304	2794	2352	2814	1297
35°	2475	1026	2444	1012	2475	1545
45°	1889	200	1821	200	1889	1381
55°	565	362	536	328	565	544
65°	198	456	208	519	198	199
75°	106	287	109	297	106	110
85°	27	39	24	46	27	30
90°	0	3	0	3	0	2
95°	17	54	17	54	17	19
105°	69	714	69	714	69	73
115°	123	772	123	772	123	122
125°	171	606	171	606	171	152
135°	206	499	206	499	206	159
145°	241	416	241	416	241	151
155°	274	354	274	354	274	127
165°	299	326	299	326	299	84
175°	313	314	313	314	313	30
180°	314	314	314	314	314	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3202.4	3202.4	3202.4	3202.4	3202.4	3202.4	3202.4	3202.4	3202.4	3202.4	3202.4
2.5°	3185.0	3232.2	3190.8	3185.4	3202.4	3198.6	3192.7	3215.0	3177.2	3215.0	3185.0
5°	3173.4	3227.7	3166.1	3149.9	3178.2	3159.3	3175.8	3208.5	3161.3	3203.8	3156.5
7.5°	3153.6	3201.7	3128.0	3117.5	3145.4	3128.8	3135.7	3181.2	3141.5	3169.4	3126.5
10°	3132.3	3174.8	3100.9	3094.3	3120.2	3103.7	3110.6	3158.0	3120.2	3146.2	3103.3
12.5°	3109.1	3142.2	3068.1	3065.2	3087.4	3076.5	3079.7	3119.6	3089.3	3115.3	3074.4
15°	3062.3	3093.0	3018.8	3007.3	3030.9	3021.4	3026.1	3061.8	3038.1	3054.7	3018.8
17.5°	3004.3	3028.9	2955.1	2920.3	2921.2	2933.1	2955.1	2998.0	2976.8	2998.5	2947.8
20°	2956.0	2984.4	2902.9	2835.2	2830.4	2842.2	2902.9	2946.1	2934.3	2957.9	2886.0
22.5°	2900.0	2918.9	2844.9	2730.6	2714.5	2726.3	2837.2	2888.3	2884.1	2900.1	2810.6
25°	2813.5	2832.4	2697.6	2533.0	2304.0	2518.8	2702.4	2794.2	2794.2	2808.4	2690.4
27.5°	2725.6	2726.1	2482.2	1626.8	1435.0	1568.2	2478.8	2677.8	2700.5	2693.4	2461.4
30°	2663.8	2647.3	2200.1	1315.0	1263.1	1296.1	2202.5	2597.0	2634.8	2608.8	2144.6
32.5°	2592.3	2545.6	1624.4	1209.0	1166.5	1195.8	1570.8	2501.1	2567.2	2511.0	1686.7
35°	2475.4	2352.6	1238.9	1068.9	1026.4	1064.2	1229.3	2311.8	2444.0	2292.9	1280.0
37.5°	2349.4	1870.0	1090.6	851.4	759.8	833.0	1085.3	1850.0	2298.2	1807.0	1089.7
40°	2250.8	1469.2	980.5	622.8	504.7	587.4	973.3	1401.7	2188.0	1508.0	956.4
42.5°	2119.5	1290.6	787.3	395.6	309.6	362.0	754.9	1260.8	2052.8	1306.6	761.2
45°	1888.6	1109.3	466.1	217.0	200.4	209.9	429.9	1088.9	1821.0	1065.3	475.8
47.5°	1495.9	846.0	299.5	184.4	202.4	184.4	290.3	819.2	1412.8	817.7	299.0
50°	1132.7	660.4	231.8	186.7	219.8	186.7	224.6	637.8	1074.7	696.9	229.4
52.5°	839.0	551.8	189.3	204.7	264.2	208.5	184.0	537.2	796.5	562.2	179.2
55°	565.1	432.9	152.1	270.2	362.3	277.2	152.1	420.4	536.1	415.7	147.3
57.5°	358.4	322.0	154.1	347.3	413.5	354.0	156.5	310.4	343.9	311.8	135.2
60°	265.7	253.8	171.5	368.8	444.4	373.5	173.9	244.3	260.8	241.9	144.9
62.5°	219.3	199.9	206.2	399.4	461.8	389.0	210.6	190.7	228.0	182.6	160.4
65°	198.0	129.6	243.9	404.5	456.4	404.5	246.3	122.7	207.7	132.1	217.4
67.5°	178.7	96.1	235.7	401.7	459.3	402.7	229.9	91.7	171.5	89.3	222.2
70°	149.7	86.0	222.2	408.9	442.0	394.7	222.2	83.5	142.5	81.1	260.8
72.5°	124.6	81.6	206.7	377.6	391.7	363.4	208.7	81.2	125.1	73.1	245.4
75°	106.3	80.3	198.0	301.6	287.4	287.4	193.2	78.0	108.7	73.3	190.8
77.5°	79.7	71.2	164.2	196.8	186.0	186.0	161.3	68.7	75.8	64.5	155.0
80°	60.4	65.1	135.2	144.7	137.7	137.7	130.4	62.7	60.4	60.4	128.0
82.5°	46.9	55.4	104.3	106.1	100.9	99.1	101.4	54.9	46.9	50.6	99.0
85°	26.6	38.4	55.5	45.7	38.6	36.3	53.1	36.0	24.2	36.0	53.1
87.5°	9.7	17.4	8.3	8.3	8.3	8.3	8.3	17.4	9.7	15.5	10.3
90°	0.0	1.0	3.0	3.0	3.0	3.0	3.0	1.0	0.0	1.0	3.0
92.5°	5.5	21.9	70.1	23.3	16.4	23.3	70.1	21.9	5.5	21.9	70.1
95°	16.8	50.6	227.1	84.2	54.3	84.2	227.1	50.6	16.8	50.6	227.1
97.5°	31.2	65.6	384.7	240.4	147.5	240.4	384.7	65.6	31.2	65.6	384.7
100°	41.5	74.3	438.4	399.7	259.7	399.7	438.4	74.3	41.5	74.3	438.4
102.5°	52.5	83.8	428.9	587.0	449.3	587.0	428.9	83.8	52.5	83.8	428.9
105°	69.1	97.1	391.0	744.8	713.9	744.8	391.0	97.1	69.1	97.1	391.0
107.5°	85.7	111.6	354.9	761.3	803.0	761.3	354.9	111.6	85.7	111.6	354.9
110°	96.8	121.9	336.7	742.3	819.6	742.3	336.7	121.9	96.8	121.9	336.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	107.8	131.4	326.4	709.6	807.7	709.6	326.4	131.4	107.8	131.4	326.4
115°	123.4	146.6	316.0	656.3	772.2	656.3	316.0	146.6	123.4	146.6	316.0
117.5°	138.6	160.6	311.8	605.0	721.8	605.0	311.8	160.6	138.6	160.6	311.8
120°	148.1	169.4	311.0	573.3	686.3	573.3	311.0	169.4	148.1	169.4	311.0
122.5°	157.6	178.1	311.0	547.8	653.1	547.8	311.0	178.1	157.6	178.1	311.0
125°	170.8	191.1	311.0	514.6	606.3	514.6	311.0	191.1	170.8	191.1	311.0
127.5°	182.5	202.0	311.0	488.8	567.0	488.8	311.0	202.0	182.5	202.0	311.0
130°	189.6	209.9	311.0	473.6	544.1	473.6	311.0	209.9	189.6	209.9	311.0
132.5°	196.7	217.0	310.3	461.6	525.1	461.6	310.3	217.0	196.7	217.0	310.3
135°	206.4	226.6	309.1	442.7	498.7	442.7	309.1	226.6	206.4	226.6	309.1
137.5°	215.9	237.1	308.9	424.5	474.6	424.5	308.9	237.1	215.9	237.1	308.9
140°	222.2	243.4	308.1	411.8	457.2	411.8	308.1	243.4	222.2	243.4	308.1
142.5°	230.1	250.5	308.9	399.1	441.4	399.1	308.9	250.5	230.1	250.5	308.9
145°	240.9	259.3	309.1	381.9	415.7	381.9	309.1	259.3	240.9	259.3	309.1
147.5°	251.8	267.4	309.3	366.8	394.4	366.8	309.3	267.4	251.8	267.4	309.3
150°	259.7	272.2	310.1	358.0	380.2	358.0	310.1	272.2	259.7	272.2	310.1
152.5°	266.0	277.0	310.1	350.8	369.1	350.8	310.1	277.0	266.0	277.0	310.1
155°	274.5	284.2	310.1	341.0	354.5	341.0	310.1	284.2	274.5	284.2	310.1
157.5°	283.6	290.2	311.0	335.0	344.2	335.0	311.0	290.2	283.6	290.2	311.0
160°	288.3	294.1	311.0	331.0	338.7	331.0	311.0	294.1	288.3	294.1	311.0
162.5°	293.1	297.3	311.0	327.8	333.2	327.8	311.0	297.3	293.1	297.3	311.0
165°	299.2	302.1	311.0	323.0	325.9	323.0	311.0	302.1	299.2	302.1	311.0
167.5°	304.9	305.7	312.0	319.6	322.1	319.6	312.0	305.7	304.9	305.7	312.0
170°	308.1	308.1	312.0	318.0	318.9	318.0	312.0	308.1	308.1	308.1	312.0
172.5°	309.7	310.4	312.0	316.4	316.6	316.4	312.0	310.4	309.7	310.4	312.0
175°	313.0	312.1	313.0	315.0	314.0	315.0	313.0	312.1	313.0	312.1	313.0
177.5°	314.0	313.2	313.2	314.8	313.2	314.8	313.2	313.2	314.0	313.2	313.2
180°	314.0	314.0	314.0	314.0	314.0	314.0	314.0	314.0	314.0	314.0	314.0



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3202.4	3202.4	3202.4	3202.4	3202.4	3202.4
2.5°	3177.5	3190.8	3190.8	3183.0	3220.9	3185.0
5°	3145.1	3175.8	3161.6	3161.3	3208.8	3173.4
7.5°	3122.4	3151.2	3137.9	3135.2	3181.9	3153.6
10°	3099.0	3120.2	3110.8	3117.8	3160.7	3132.3
12.5°	3066.2	3091.3	3081.8	3092.7	3131.8	3109.1
15°	3009.6	3030.9	3035.6	3040.6	3085.9	3062.3
17.5°	2916.2	2926.6	2950.2	2983.6	3030.8	3004.3
20°	2842.8	2857.0	2871.2	2929.5	2984.4	2956.0
22.5°	2759.3	2754.6	2787.7	2856.0	2924.6	2900.0
25°	2534.1	2352.3	2553.0	2729.0	2820.6	2813.5
27.5°	1764.4	1531.1	1737.5	2518.9	2711.5	2725.6
30°	1388.6	1280.0	1386.2	2248.4	2630.7	2663.8
32.5°	1232.9	1158.3	1223.0	1711.3	2529.0	2592.3
35°	1063.9	1011.9	1063.9	1280.0	2329.0	2475.4
37.5°	851.5	745.3	849.7	1106.1	1882.8	2349.4
40°	634.5	499.9	615.6	990.2	1504.6	2250.8
42.5°	422.8	322.2	400.1	779.6	1301.5	2119.5
45°	228.8	200.4	219.3	470.9	1062.1	1888.6
47.5°	179.4	189.8	179.4	297.1	812.5	1495.9
50°	172.2	205.3	172.2	229.4	672.2	1132.7
52.5°	187.7	222.7	185.8	181.1	548.5	839.0
55°	212.7	328.4	215.1	147.3	402.2	565.1
57.5°	302.9	369.5	306.2	139.6	309.7	358.4
60°	311.1	398.5	308.8	147.3	239.7	265.7
62.5°	368.0	493.2	367.5	168.6	178.2	219.3
65°	472.0	519.2	476.7	214.9	127.2	198.0
67.5°	448.0	481.6	443.3	230.4	87.6	178.7
70°	440.1	466.1	435.4	263.2	81.3	149.7
72.5°	410.6	413.9	402.1	243.9	73.1	124.6
75°	318.3	297.1	306.5	210.1	73.2	106.3
77.5°	197.8	189.3	190.8	160.4	64.6	79.7
80°	149.6	144.9	142.5	135.2	60.4	60.4
82.5°	111.0	106.3	103.9	104.3	50.6	46.9
85°	50.6	45.9	43.5	60.4	36.0	26.6
87.5°	10.3	10.3	8.4	10.3	13.6	9.7
90°	3.0	3.0	3.0	3.0	1.0	0.0
92.5°	23.3	16.4	23.3	70.1	21.9	5.5
95°	84.2	54.3	84.2	227.1	50.6	16.8
97.5°	240.4	147.5	240.4	384.7	65.6	31.2
100°	399.7	259.7	399.7	438.4	74.3	41.5
102.5°	587.0	449.3	587.0	428.9	83.8	52.5
105°	744.8	713.9	744.8	391.0	97.1	69.1
107.5°	761.3	803.0	761.3	354.9	111.6	85.7
110°	742.3	819.6	742.3	336.7	121.9	96.8



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	709.6	807.7	709.6	326.4	131.4	107.8
115°	656.3	772.2	656.3	316.0	146.6	123.4
117.5°	605.0	721.8	605.0	311.8	160.6	138.6
120°	573.3	686.3	573.3	311.0	169.4	148.1
122.5°	547.8	653.1	547.8	311.0	178.1	157.6
125°	514.6	606.3	514.6	311.0	191.1	170.8
127.5°	488.8	567.0	488.8	311.0	202.0	182.5
130°	473.6	544.1	473.6	311.0	209.9	189.6
132.5°	461.6	525.1	461.6	310.3	217.0	196.7
135°	442.7	498.7	442.7	309.1	226.6	206.4
137.5°	424.5	474.6	424.5	308.9	237.1	215.9
140°	411.8	457.2	411.8	308.1	243.4	222.2
142.5°	399.1	441.4	399.1	308.9	250.5	230.1
145°	381.9	415.7	381.9	309.1	259.3	240.9
147.5°	366.8	394.4	366.8	309.3	267.4	251.8
150°	358.0	380.2	358.0	310.1	272.2	259.7
152.5°	350.8	369.1	350.8	310.1	277.0	266.0
155°	341.0	354.5	341.0	310.1	284.2	274.5
157.5°	335.0	344.2	335.0	311.0	290.2	283.6
160°	331.0	338.7	331.0	311.0	294.1	288.3
162.5°	327.8	333.2	327.8	311.0	297.3	293.1
165°	323.0	325.9	323.0	311.0	302.1	299.2
167.5°	319.6	322.1	319.6	312.0	305.7	304.9
170°	318.0	318.9	318.0	312.0	308.1	308.1
172.5°	316.4	316.6	316.4	312.0	310.4	309.7
175°	315.0	314.0	315.0	313.0	312.1	313.0
177.5°	314.8	313.2	314.8	313.2	313.2	314.0
180°	314.0	314.0	314.0	314.0	314.0	314.0



TEST NUMBER: P853762

CATALOG NUMBER: SQ2-FA-050U-125D-935-UNV-STD-W-4

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	15.42	16.34	16.20	17.12	18.07	14.27	15.19	15.06	15.98	16.93
	3H	16.12	16.94	16.92	17.74	18.72	20.43	21.25	21.23	22.05	23.03
	4H	16.54	17.31	17.35	18.11	19.11	21.71	22.48	22.52	23.29	24.28
	6H	16.89	17.61	17.72	18.42	19.43	22.32	23.03	23.14	23.84	24.85
	8H	17.01	17.69	17.85	18.52	19.53	22.45	23.12	23.28	23.95	24.96
	12H	17.09	17.73	17.92	18.55	19.59	22.49	23.13	23.33	23.95	24.99
4H	2H	15.82	16.59	16.64	17.40	18.39	14.82	15.59	15.63	16.39	17.39
	3H	16.82	17.47	17.65	18.31	19.31	21.15	21.79	21.97	22.63	23.64
	4H	17.39	17.97	18.22	18.81	19.85	22.60	23.18	23.43	24.02	25.06
	6H	17.87	18.37	18.72	19.23	20.28	23.34	23.84	24.19	24.70	25.75
	8H	18.04	18.51	18.89	19.36	20.42	23.51	23.98	24.36	24.83	25.89
	12H	18.16	18.58	19.03	19.45	20.51	23.57	23.99	24.45	24.87	25.93
8H	4H	18.49	18.96	19.35	19.82	20.87	22.73	23.20	23.58	24.05	25.11
	6H	19.10	19.49	19.98	20.39	21.44	23.61	23.99	24.49	24.89	25.95
	8H	19.34	19.68	20.23	20.57	21.64	23.86	24.20	24.75	25.09	26.16
	12H	19.51	19.81	20.41	20.70	21.82	23.98	24.28	24.88	25.16	26.29
12H	4H	18.64	19.06	19.51	19.94	21.00	22.69	23.11	23.56	23.99	25.05
	6H	19.38	19.72	20.27	20.61	21.68	23.62	23.96	24.51	24.85	25.92
	8H	19.68	19.98	20.57	20.86	21.99	23.90	24.20	24.80	25.08	26.21