

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: P853759

Luminaire Tested: SQ2-FA-050U-100D-935-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P853759  
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-100D-935-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT  
UPLIGHT 500 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

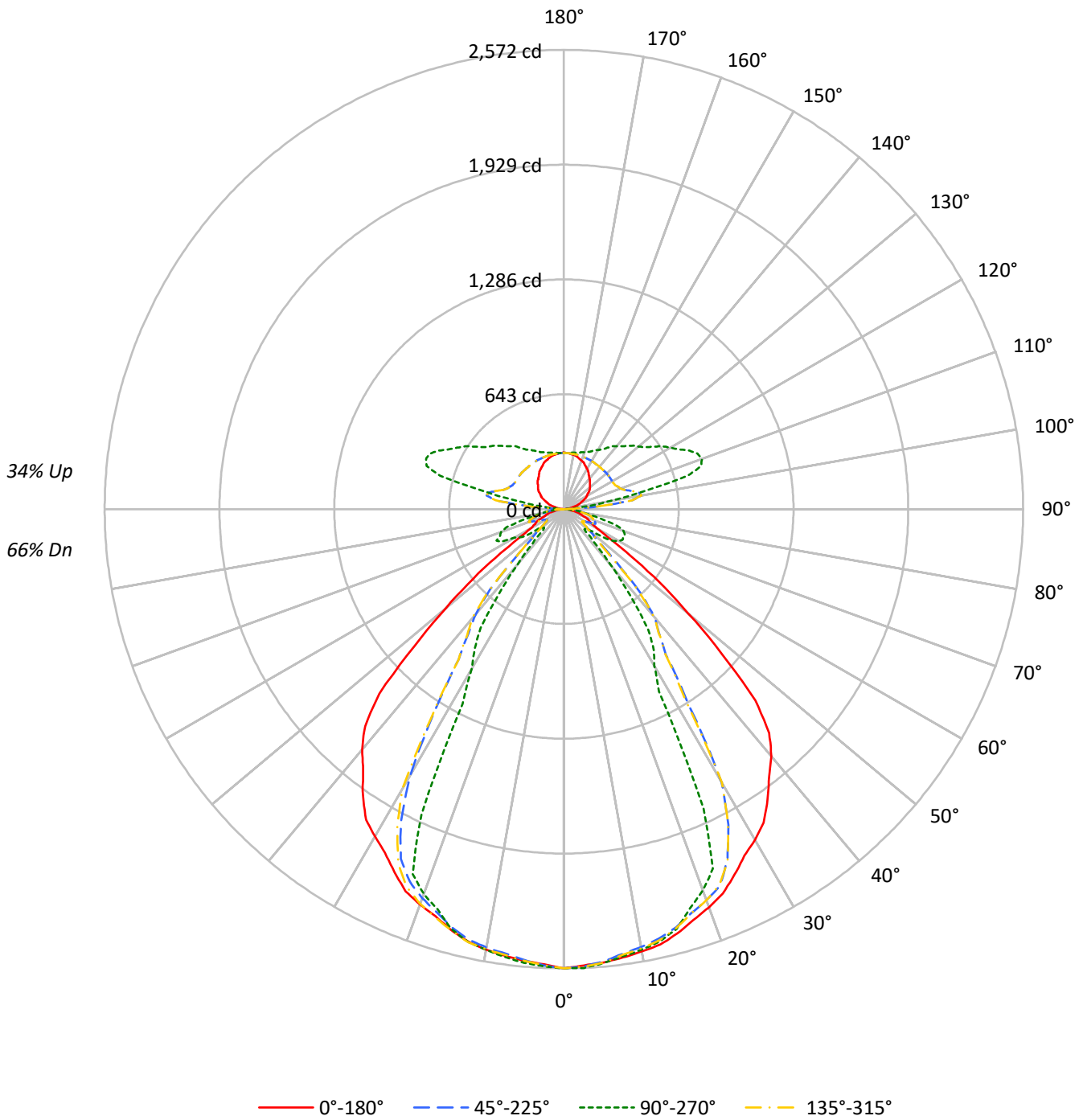
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5713.1 lumens  
Efficiency: N/A  
Efficacy: 109.0 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): 52.4  
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	0
RCR																		
0	111	111	111	111	104	104	104	104	92	92	92	81	81	81	71	71	71	66
1	103	99	95	92	97	93	90	87	83	81	79	73	72	70	65	63	62	58
2	95	88	83	78	89	84	79	75	75	71	68	66	64	61	59	57	55	51
3	88	79	73	68	83	75	69	65	68	63	59	61	57	54	54	51	49	46
4	82	72	65	59	77	68	62	57	62	57	53	55	52	48	50	47	44	41
5	76	65	58	52	72	62	56	51	56	51	47	51	47	44	46	43	40	37
6	71	60	52	47	67	57	50	45	52	46	42	47	43	39	43	39	37	34
7	66	55	47	42	63	52	46	41	48	42	39	44	39	36	40	36	34	31
8	62	51	43	38	59	48	42	37	44	39	35	41	36	33	37	34	31	29
9	58	47	40	35	55	45	39	34	41	36	32	38	34	30	35	31	29	27
10	55	44	37	32	52	42	36	31	39	33	30	36	31	28	33	29	27	25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	41525	41525	41525	41525
5°	41306	41370	41149	41337
10°	41243	41084	41084	41084
15°	41110	40689	40786	40689
20°	40790	39058	40491	39424
25°	40255	32963	39979	33654
30°	39884	18912	39452	19166
35°	39186	16247	38688	16019
40°	38101	8545	37036	8462
45°	34632	3676	33392	3676
50°	22850	4433	21680	4142
55°	12777	8189	12121	7426
60°	6891	11525	6765	10333
65°	6074	14006	6372	15931
70°	5679	16754	5401	17670
75°	5321	14398	5446	14885
80°	4510	10284	4510	10823
85°	3946	5743	3594	6836

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 34632 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	242.0	4.2
10°-20°	686.6	12.0
20°-30°	936.2	16.4
30°-40°	786.7	13.8
40°-50°	446.8	7.8
50°-60°	237.1	4.2
60°-70°	218.3	3.8
70°-80°	160.3	2.8
80°-90°	42.3	0.7
90°-100°	125.5	2.2
100°-110°	398.1	7.0
110°-120°	390.3	6.8
120°-130°	317.6	5.6
130°-140°	259.0	4.5
140°-150°	201.9	3.5
150°-160°	145.5	2.5
160°-170°	88.9	1.6
170°-180°	30.0	0.5
0°-30°	1864.9	32.6
0°-40°	2651.6	46.4
0°-60°	3335.6	58.4
0°-90°	3756.4	65.8
90°-120°	913.9	16.0
90°-150°	1692.4	29.6
90°-180°	1957.0	34.3
0°-180°	5713.1	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2572	2572	2572	2572	2572	
5°	2549	2552	2539	2550	2549	242
15°	2459	2434	2440	2434	2459	693
25°	2260	1850	2244	1889	2260	1042
35°	1988	824	1963	813	1988	1241
45°	1517	161	1462	161	1517	1109
55°	454	291	431	264	454	437
65°	159	367	167	417	159	160
75°	85	231	87	239	85	88
85°	21	31	19	37	21	24
90°	0	3	0	3	0	2
95°	17	54	17	54	17	19
105°	69	716	69	716	69	73
115°	124	775	124	775	124	122
125°	171	608	171	608	171	153
135°	207	500	207	500	207	160
145°	242	417	242	417	242	151
155°	276	356	276	356	276	127
165°	300	327	300	327	300	85
175°	314	315	314	315	314	30
180°	315	315	315	315	315	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2571.9	2571.9	2571.9	2571.9	2571.9	2571.9	2571.9	2571.9	2571.9	2571.9	2571.9
2.5°	2557.9	2595.8	2562.6	2558.2	2571.9	2568.8	2564.1	2582.0	2551.7	2582.0	2557.9
5°	2548.6	2592.2	2542.8	2529.7	2552.5	2537.3	2550.5	2576.8	2538.9	2573.0	2535.0
7.5°	2532.7	2571.4	2512.1	2503.7	2526.1	2512.8	2518.3	2554.8	2523.0	2545.4	2511.0
10°	2515.6	2549.7	2490.4	2485.1	2505.9	2492.6	2498.2	2536.3	2505.9	2526.8	2492.3
12.5°	2497.0	2523.5	2464.0	2461.7	2479.5	2470.8	2473.3	2505.4	2481.1	2502.0	2469.1
15°	2459.4	2484.0	2424.5	2415.2	2434.2	2426.6	2430.3	2458.9	2440.0	2453.2	2424.5
17.5°	2412.8	2432.5	2373.2	2345.3	2346.1	2355.6	2373.2	2407.8	2390.7	2408.2	2367.4
20°	2374.0	2396.8	2331.4	2277.0	2273.2	2282.7	2331.4	2366.1	2356.6	2375.5	2317.8
22.5°	2329.0	2344.2	2284.8	2193.0	2180.1	2189.6	2278.6	2319.6	2316.2	2329.1	2257.3
25°	2259.6	2274.8	2166.5	2034.3	1850.3	2022.9	2170.4	2244.1	2244.1	2255.5	2160.7
27.5°	2189.0	2189.4	1993.5	1306.5	1152.5	1259.4	1990.8	2150.6	2168.8	2163.1	1976.8
30°	2139.3	2126.1	1766.9	1056.1	1014.4	1040.9	1768.9	2085.7	2116.1	2095.2	1722.3
32.5°	2081.9	2044.4	1304.6	970.9	936.8	960.3	1261.5	2008.7	2061.8	2016.6	1354.6
35°	1988.1	1889.4	995.0	858.5	824.3	854.7	987.2	1856.6	1962.8	1841.5	1028.0
37.5°	1886.8	1501.8	875.9	683.8	610.2	669.0	871.6	1485.7	1845.7	1451.2	875.1
40°	1807.7	1179.9	787.5	500.2	405.4	471.7	781.6	1125.7	1757.2	1211.1	768.1
42.5°	1702.2	1036.5	632.3	317.7	248.7	290.8	606.3	1012.6	1648.6	1049.3	611.4
45°	1516.7	890.9	374.3	174.3	161.0	168.6	345.2	874.5	1462.4	855.6	382.1
47.5°	1201.4	679.5	240.5	148.1	162.5	148.1	233.1	657.9	1134.6	656.7	240.1
50°	909.7	530.4	186.2	149.9	176.5	149.9	180.4	512.3	863.1	559.7	184.3
52.5°	673.8	443.2	152.1	164.4	212.2	167.4	147.8	431.4	639.7	451.5	143.9
55°	453.9	347.7	122.2	217.0	290.9	222.7	122.2	337.7	430.6	333.9	118.3
57.5°	287.8	258.6	123.7	279.0	332.1	284.3	125.7	249.3	276.2	250.4	108.6
60°	213.4	203.9	137.7	296.2	356.9	300.0	139.6	196.2	209.5	194.3	116.4
62.5°	176.1	160.6	165.6	320.8	370.8	312.4	169.1	153.1	183.1	146.7	128.8
65°	159.0	104.0	195.9	324.9	366.6	324.9	197.8	98.5	166.8	106.1	174.6
67.5°	143.5	77.2	189.3	322.6	368.9	323.4	184.6	73.6	137.7	71.7	178.4
70°	120.3	69.0	178.4	328.4	354.9	317.0	178.4	67.0	114.4	65.1	209.5
72.5°	100.1	65.6	166.0	303.2	314.6	291.8	167.6	65.2	100.5	58.7	197.1
75°	85.3	64.5	159.0	242.2	230.8	230.8	155.2	62.6	87.3	58.8	153.2
77.5°	64.0	57.2	131.9	158.1	149.3	149.3	129.6	55.2	60.9	51.8	124.5
80°	48.5	52.3	108.6	116.2	110.6	110.6	104.7	50.4	48.5	48.5	102.8
82.5°	37.6	44.5	83.8	85.2	81.1	79.6	81.5	44.1	37.6	40.7	79.5
85°	21.3	30.8	44.6	36.7	31.0	29.1	42.7	28.9	19.4	28.9	42.7
87.5°	7.8	14.0	6.8	6.8	6.8	6.8	6.8	14.0	7.8	12.5	8.4
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	22.0	70.4	23.4	16.4	23.4	70.4	22.0	5.5	22.0	70.4
95°	16.8	50.8	227.9	84.5	54.5	84.5	227.9	50.8	16.8	50.8	227.9
97.5°	31.3	65.8	386.0	241.2	148.0	241.2	386.0	65.8	31.3	65.8	386.0
100°	41.6	74.6	439.9	401.1	260.6	401.1	439.9	74.6	41.6	74.6	439.9
102.5°	52.7	84.1	430.4	589.0	450.8	589.0	430.4	84.1	52.7	84.1	430.4
105°	69.4	97.5	392.4	747.4	716.4	747.4	392.4	97.5	69.4	97.5	392.4
107.5°	86.0	112.0	356.1	763.9	805.8	763.9	356.1	112.0	86.0	112.0	356.1
110°	97.1	122.3	337.9	744.9	822.4	744.9	337.9	122.3	97.1	122.3	337.9



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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°	108.2	131.8	327.6	712.1	810.5	712.1	327.6	131.8	108.2	131.8	327.6
115°	123.9	147.1	317.1	658.6	774.9	658.6	317.1	147.1	123.9	147.1	317.1
117.5°	139.1	161.2	312.9	607.1	724.3	607.1	312.9	161.2	139.1	161.2	312.9
120°	148.6	169.9	312.1	575.3	688.7	575.3	312.1	169.9	148.6	169.9	312.1
122.5°	158.1	178.7	312.1	549.8	655.4	549.8	312.1	178.7	158.1	178.7	312.1
125°	171.4	191.8	312.1	516.4	608.4	516.4	312.1	191.8	171.4	191.8	312.1
127.5°	183.1	202.7	312.1	490.5	569.0	490.5	312.1	202.7	183.1	202.7	312.1
130°	190.2	210.6	312.1	475.2	546.0	475.2	312.1	210.6	190.2	210.6	312.1
132.5°	197.4	217.7	311.3	463.2	526.9	463.2	311.3	217.7	197.4	217.7	311.3
135°	207.1	227.4	310.1	444.2	500.4	444.2	310.1	227.4	207.1	227.4	310.1
137.5°	216.6	237.9	309.9	426.0	476.2	426.0	309.9	237.9	216.6	237.9	309.9
140°	222.9	244.3	309.2	413.2	458.8	413.2	309.2	244.3	222.9	244.3	309.2
142.5°	230.9	251.4	309.9	400.5	442.9	400.5	309.9	251.4	230.9	251.4	309.9
145°	241.8	260.2	310.1	383.2	417.2	383.2	310.1	260.2	241.8	260.2	310.1
147.5°	252.7	268.4	310.3	368.0	395.8	368.0	310.3	268.4	252.7	268.4	310.3
150°	260.6	273.2	311.1	359.2	381.5	359.2	311.1	273.2	260.6	273.2	311.1
152.5°	266.9	278.0	311.1	352.0	370.4	352.0	311.1	278.0	266.9	278.0	311.1
155°	275.5	285.2	311.1	342.2	355.7	342.2	311.1	285.2	275.5	285.2	311.1
157.5°	284.6	291.2	312.1	336.1	345.4	336.1	312.1	291.2	284.6	291.2	312.1
160°	289.3	295.1	312.1	332.1	339.9	332.1	312.1	295.1	289.3	295.1	312.1
162.5°	294.1	298.4	312.1	328.9	334.3	328.9	312.1	298.4	294.1	298.4	312.1
165°	300.2	303.1	312.1	324.1	327.0	324.1	312.1	303.1	300.2	303.1	312.1
167.5°	306.0	306.8	313.1	320.7	323.2	320.7	313.1	306.8	306.0	306.8	313.1
170°	309.2	309.2	313.1	319.1	320.1	319.1	313.1	309.2	309.2	309.2	313.1
172.5°	310.7	311.5	313.1	317.5	317.7	317.5	313.1	311.5	310.7	311.5	313.1
175°	314.1	313.1	314.1	316.1	315.1	316.1	314.1	313.1	314.1	313.1	314.1
177.5°	315.1	314.3	314.3	315.9	314.3	315.9	314.3	314.3	315.1	314.3	314.3
180°	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2571.9	2571.9	2571.9	2571.9	2571.9	2571.9
2.5°	2551.9	2562.6	2562.6	2556.3	2586.7	2557.9
5°	2525.9	2550.5	2539.1	2538.9	2577.0	2548.6
7.5°	2507.6	2530.7	2520.1	2517.9	2555.4	2532.7
10°	2488.8	2505.9	2498.3	2504.0	2538.4	2515.6
12.5°	2462.5	2482.6	2475.1	2483.8	2515.2	2497.0
15°	2417.1	2434.2	2437.9	2441.9	2478.3	2459.4
17.5°	2342.0	2350.4	2369.3	2396.1	2434.1	2412.8
20°	2283.1	2294.5	2305.9	2352.7	2396.8	2374.0
22.5°	2216.1	2212.3	2238.8	2293.7	2348.8	2329.0
25°	2035.2	1889.1	2050.3	2191.7	2265.3	2259.6
27.5°	1417.1	1229.7	1395.4	2023.0	2177.6	2189.0
30°	1115.2	1028.0	1113.3	1805.7	2112.8	2139.3
32.5°	990.1	930.2	982.2	1374.4	2031.1	2081.9
35°	854.4	812.7	854.4	1028.0	1870.5	1988.1
37.5°	683.9	598.5	682.4	888.3	1512.1	1886.8
40°	509.6	401.5	494.4	795.2	1208.4	1807.7
42.5°	339.5	258.7	321.3	626.1	1045.2	1702.2
45°	183.7	161.0	176.2	378.2	853.0	1516.7
47.5°	144.1	152.4	144.1	238.6	652.5	1201.4
50°	138.3	164.9	138.3	184.3	539.8	909.7
52.5°	150.8	178.8	149.2	145.5	440.5	673.8
55°	170.9	263.8	172.8	118.3	323.0	453.9
57.5°	243.3	296.8	245.9	112.1	248.8	287.8
60°	249.9	320.0	248.0	118.3	192.5	213.4
62.5°	295.5	396.1	295.2	135.4	143.1	176.1
65°	379.1	417.0	382.9	172.6	102.2	159.0
67.5°	359.8	386.7	356.0	185.0	70.3	143.5
70°	353.5	374.3	349.7	211.4	65.3	120.3
72.5°	329.8	332.4	323.0	195.9	58.7	100.1
75°	255.6	238.6	246.2	168.7	58.8	85.3
77.5°	158.9	152.1	153.2	128.8	51.9	64.0
80°	120.2	116.4	114.5	108.6	48.5	48.5
82.5°	89.1	85.3	83.4	83.8	40.7	37.6
85°	40.6	36.9	35.0	48.5	28.9	21.3
87.5°	8.4	8.4	6.8	8.4	11.0	7.8
90°	3.0	3.0	3.0	3.0	1.0	0.0
92.5°	23.4	16.4	23.4	70.4	22.0	5.5
95°	84.5	54.5	84.5	227.9	50.8	16.8
97.5°	241.2	148.0	241.2	386.0	65.8	31.3
100°	401.1	260.6	401.1	439.9	74.6	41.6
102.5°	589.0	450.8	589.0	430.4	84.1	52.7
105°	747.4	716.4	747.4	392.4	97.5	69.4
107.5°	763.9	805.8	763.9	356.1	112.0	86.0
110°	744.9	822.4	744.9	337.9	122.3	97.1





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	712.1	810.5	712.1	327.6	131.8	108.2
115°	658.6	774.9	658.6	317.1	147.1	123.9
117.5°	607.1	724.3	607.1	312.9	161.2	139.1
120°	575.3	688.7	575.3	312.1	169.9	148.6
122.5°	549.8	655.4	549.8	312.1	178.7	158.1
125°	516.4	608.4	516.4	312.1	191.8	171.4
127.5°	490.5	569.0	490.5	312.1	202.7	183.1
130°	475.2	546.0	475.2	312.1	210.6	190.2
132.5°	463.2	526.9	463.2	311.3	217.7	197.4
135°	444.2	500.4	444.2	310.1	227.4	207.1
137.5°	426.0	476.2	426.0	309.9	237.9	216.6
140°	413.2	458.8	413.2	309.2	244.3	222.9
142.5°	400.5	442.9	400.5	309.9	251.4	230.9
145°	383.2	417.2	383.2	310.1	260.2	241.8
147.5°	368.0	395.8	368.0	310.3	268.4	252.7
150°	359.2	381.5	359.2	311.1	273.2	260.6
152.5°	352.0	370.4	352.0	311.1	278.0	266.9
155°	342.2	355.7	342.2	311.1	285.2	275.5
157.5°	336.1	345.4	336.1	312.1	291.2	284.6
160°	332.1	339.9	332.1	312.1	295.1	289.3
162.5°	328.9	334.3	328.9	312.1	298.4	294.1
165°	324.1	327.0	324.1	312.1	303.1	300.2
167.5°	320.7	323.2	320.7	313.1	306.8	306.0
170°	319.1	320.1	319.1	313.1	309.2	309.2
172.5°	317.5	317.7	317.5	313.1	311.5	310.7
175°	316.1	315.1	316.1	314.1	313.1	314.1
177.5°	315.9	314.3	315.9	314.3	314.3	315.1
180°	315.1	315.1	315.1	315.1	315.1	315.1



TEST NUMBER: P853759

CATALOG NUMBER: SQ2-FA-050U-100D-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	14.26	15.14	15.10	15.97	17.01	13.12	13.99	13.95	14.83	15.87
	3H	14.96	15.75	15.81	16.59	17.66	19.27	20.05	20.12	20.90	21.97
	4H	15.38	16.11	16.24	16.97	18.04	20.55	21.29	21.41	22.14	23.22
	6H	15.73	16.41	16.60	17.27	18.36	21.16	21.84	22.03	22.70	23.79
	8H	15.85	16.49	16.73	17.37	18.46	21.28	21.93	22.16	22.81	23.89
	12H	15.92	16.54	16.81	17.41	18.52	21.33	21.94	22.21	22.81	23.92
4H	2H	14.66	15.40	15.53	16.25	17.33	13.66	14.39	14.52	15.25	16.32
	3H	15.66	16.27	16.53	17.16	18.25	19.98	20.60	20.86	21.48	22.57
	4H	16.22	16.78	17.11	17.67	18.78	21.43	21.99	22.32	22.88	23.99
	6H	16.70	17.18	17.60	18.09	19.21	22.17	22.65	23.07	23.56	24.68
	8H	16.87	17.32	17.77	18.22	19.35	22.34	22.79	23.24	23.69	24.82
	12H	16.99	17.39	17.91	18.31	19.45	22.40	22.81	23.32	23.73	24.86
8H	4H	17.32	17.77	18.23	18.68	19.81	21.56	22.01	22.46	22.91	24.04
	6H	17.93	18.30	18.86	19.25	20.38	22.44	22.81	23.37	23.75	24.88
	8H	18.17	18.49	19.11	19.43	20.58	22.69	23.02	23.63	23.95	25.10
	12H	18.34	18.63	19.28	19.56	20.76	22.81	23.10	23.75	24.03	25.23
12H	4H	17.47	17.87	18.39	18.80	19.93	21.52	21.92	22.44	22.85	23.98
	6H	18.21	18.53	19.15	19.47	20.62	22.45	22.77	23.39	23.71	24.86
	8H	18.51	18.80	19.45	19.72	20.92	22.73	23.02	23.67	23.94	25.15