

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: P853758

Luminaire Tested: SQ2-FA-050U-100D-930-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853758
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-930-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

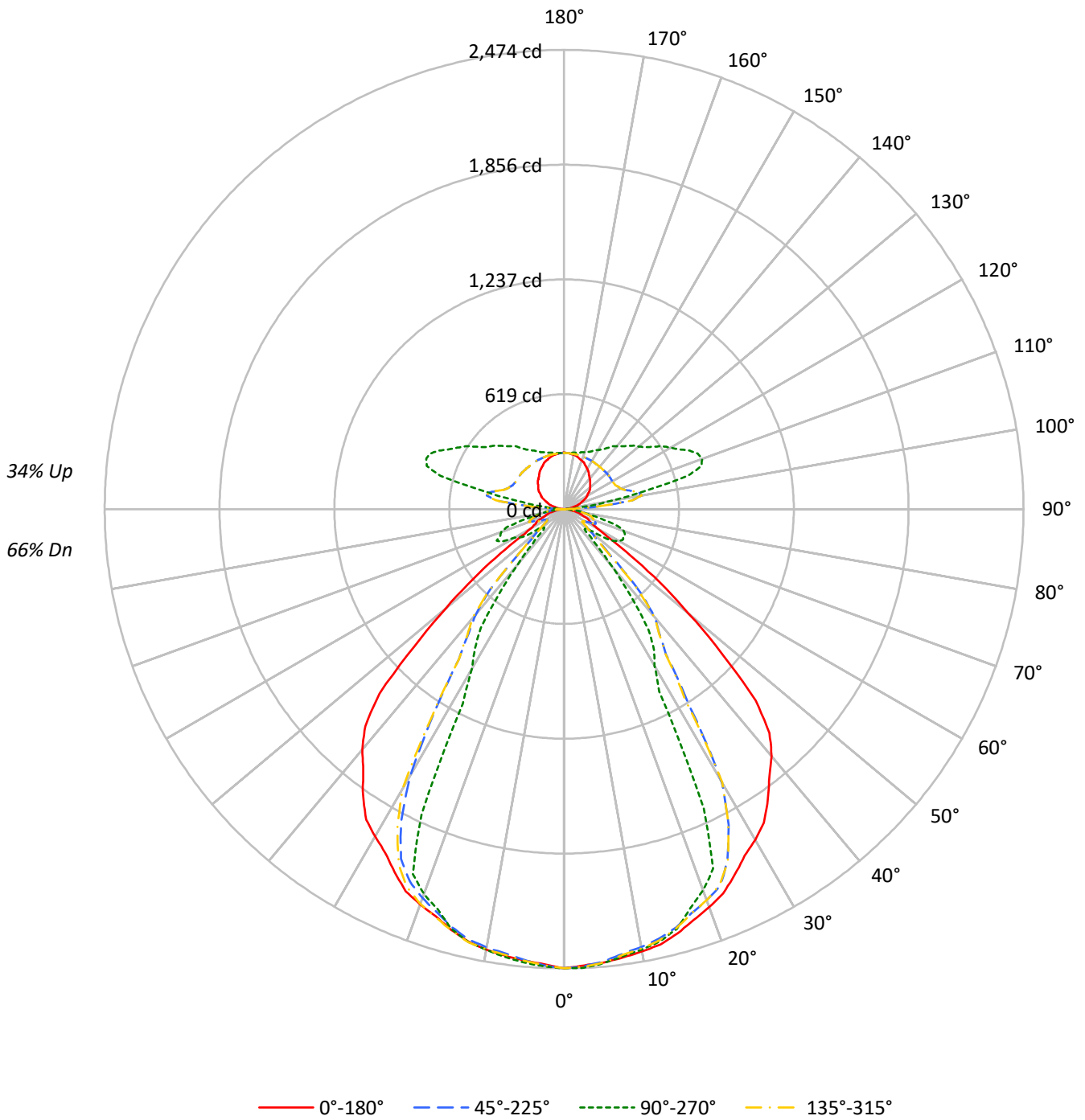
Lumens per Lamp: N/A
Luminaire Lumens: 5494.8 lumens
Efficiency: N/A
Efficacy: 104.9 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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°	39938	39938	39938	39938
5°	39728	39789	39577	39759
10°	39667	39515	39515	39515
15°	39539	39134	39228	39134
20°	39232	37565	38943	37917
25°	38717	31705	38450	32370
30°	38361	18189	37943	18433
35°	37688	15626	37211	15406
40°	36644	8218	35622	8140
45°	33310	3535	32118	3535
50°	21976	4265	20851	3984
55°	12287	7876	11657	7142
60°	6626	11083	6507	9939
65°	5845	13471	6128	15324
70°	5462	16117	5198	16995
75°	5122	13849	5234	14317
80°	4333	9884	4333	10404
85°	3798	5521	3464	6558

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 33310 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.8	4.2
10°-20°	660.4	12.0
20°-30°	900.4	16.4
30°-40°	756.7	13.8
40°-50°	429.8	7.8
50°-60°	228.0	4.1
60°-70°	210.0	3.8
70°-80°	154.1	2.8
80°-90°	40.6	0.7
90°-100°	120.7	2.2
100°-110°	382.8	7.0
110°-120°	375.4	6.8
120°-130°	305.5	5.6
130°-140°	249.1	4.5
140°-150°	194.2	3.5
150°-160°	139.9	2.5
160°-170°	85.5	1.6
170°-180°	28.9	0.5
0°-30°	1793.6	32.6
0°-40°	2550.3	46.4
0°-60°	3208.1	58.4
0°-90°	3612.8	65.8
90°-120°	879.0	16.0
90°-150°	1627.7	29.6
90°-180°	1882.0	34.3
0°-180°	5494.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2474	2474	2474	2474	2474	
5°	2451	2455	2442	2453	2451	233
15°	2365	2341	2347	2341	2365	667
25°	2173	1780	2158	1817	2173	1002
35°	1912	793	1888	782	1912	1194
45°	1459	155	1407	155	1459	1067
55°	436	280	414	254	436	420
65°	153	353	160	401	153	154
75°	82	222	84	230	82	85
85°	20	30	19	35	20	23
90°	0	3	0	3	0	2
95°	16	52	16	52	16	19
105°	67	689	67	689	67	70
115°	119	745	119	745	119	118
125°	165	585	165	585	165	147
135°	199	481	199	481	199	154
145°	232	401	232	401	232	146
155°	265	342	265	342	265	122
165°	289	314	289	314	289	81
175°	302	303	302	303	302	29
180°	303	303	303	303	303	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2473.6	2473.6	2473.6	2473.6	2473.6	2473.6	2473.6	2473.6	2473.6	2473.6	2473.6
2.5°	2460.2	2496.7	2464.7	2460.5	2473.6	2470.7	2466.1	2483.4	2454.2	2483.4	2460.2
5°	2451.2	2493.2	2445.6	2433.1	2455.0	2440.4	2453.1	2478.4	2441.9	2474.7	2438.2
7.5°	2435.9	2473.1	2416.2	2408.1	2429.6	2416.8	2422.1	2457.2	2426.6	2448.1	2415.0
10°	2419.5	2452.3	2395.3	2390.1	2410.2	2397.4	2402.7	2439.4	2410.2	2430.2	2397.1
12.5°	2401.6	2427.1	2369.9	2367.7	2384.8	2376.4	2378.8	2409.7	2386.3	2406.4	2374.7
15°	2365.4	2389.1	2331.8	2322.9	2341.2	2333.9	2337.4	2365.0	2346.8	2359.5	2331.8
17.5°	2320.6	2339.6	2282.6	2255.7	2256.5	2265.6	2282.6	2315.8	2299.4	2316.2	2277.0
20°	2283.3	2305.2	2242.3	2190.0	2186.3	2195.4	2242.3	2275.7	2266.5	2284.8	2229.2
22.5°	2240.1	2254.6	2197.5	2109.2	2096.8	2105.9	2191.6	2231.0	2227.7	2240.1	2171.0
25°	2173.3	2187.9	2083.7	1956.6	1779.7	1945.6	2087.5	2158.3	2158.3	2169.3	2078.1
27.5°	2105.4	2105.7	1917.3	1256.6	1108.5	1211.3	1914.7	2068.5	2086.0	2080.5	1901.3
30°	2057.6	2044.8	1699.4	1015.8	975.6	1001.2	1701.3	2006.0	2035.2	2015.2	1656.5
32.5°	2002.4	1966.3	1254.7	933.9	901.0	923.6	1213.3	1931.9	1983.0	1939.6	1302.8
35°	1912.1	1817.3	957.0	825.7	792.8	822.0	949.5	1785.7	1887.9	1771.1	988.7
37.5°	1814.7	1444.5	842.4	657.6	586.9	643.4	838.3	1429.0	1775.2	1395.8	841.7
40°	1738.6	1134.9	757.4	481.1	389.9	453.7	751.8	1082.7	1690.1	1164.8	738.7
42.5°	1637.1	996.9	608.1	305.5	239.2	279.6	583.1	973.9	1585.6	1009.3	588.0
45°	1458.8	856.9	360.0	167.6	154.8	162.1	332.1	841.1	1406.6	822.9	367.5
47.5°	1155.5	653.5	231.3	142.5	156.3	142.5	224.2	632.7	1091.3	631.6	230.9
50°	874.9	510.1	179.1	144.2	169.8	144.2	173.5	492.7	830.1	538.3	177.2
52.5°	648.1	426.3	146.3	158.1	204.1	161.0	142.1	415.0	615.2	434.3	138.4
55°	436.5	334.4	117.5	208.7	279.8	214.2	117.5	324.8	414.1	321.1	113.8
57.5°	276.8	248.7	119.0	268.3	319.4	273.4	120.9	239.7	265.6	240.8	104.5
60°	205.2	196.1	132.4	284.9	343.2	288.5	134.3	188.7	201.5	186.9	111.9
62.5°	169.4	154.4	159.3	308.5	356.7	300.5	162.7	147.3	176.1	141.1	123.9
65°	153.0	100.1	188.4	312.4	352.6	312.4	190.3	94.8	160.4	102.1	167.9
67.5°	138.0	74.2	182.1	310.3	354.8	311.0	177.6	70.8	132.4	69.0	171.6
70°	115.7	66.4	171.6	315.8	341.4	304.9	171.6	64.5	110.1	62.6	201.5
72.5°	96.3	63.1	159.7	291.6	302.6	280.7	161.2	62.7	96.6	56.5	189.5
75°	82.1	62.0	153.0	232.9	222.0	222.0	149.2	60.2	83.9	56.6	147.4
77.5°	61.6	55.0	126.9	152.0	143.6	143.6	124.6	53.1	58.6	49.8	119.8
80°	46.6	50.3	104.5	111.8	106.3	106.3	100.7	48.5	46.6	46.6	98.9
82.5°	36.2	42.8	80.6	82.0	78.0	76.5	78.3	42.4	36.2	39.1	76.5
85°	20.5	29.6	42.9	35.3	29.8	28.0	41.0	27.8	18.7	27.8	41.0
87.5°	7.5	13.5	6.5	6.5	6.5	6.5	6.5	13.5	7.5	12.0	8.0
90°	0.0	0.9	2.9	2.9	2.9	2.9	2.9	0.9	0.0	0.9	2.9
92.5°	5.3	21.2	67.7	22.5	15.8	22.5	67.7	21.2	5.3	21.2	67.7
95°	16.2	48.8	219.2	81.3	52.4	81.3	219.2	48.8	16.2	48.8	219.2
97.5°	30.1	63.3	371.3	232.0	142.4	232.0	371.3	63.3	30.1	63.3	371.3
100°	40.0	71.7	423.1	385.8	250.6	385.8	423.1	71.7	40.0	71.7	423.1
102.5°	50.7	80.9	414.0	566.5	433.6	566.5	414.0	80.9	50.7	80.9	414.0
105°	66.7	93.7	377.4	718.8	689.0	718.8	377.4	93.7	66.7	93.7	377.4
107.5°	82.7	107.7	342.5	734.7	775.0	734.7	342.5	107.7	82.7	107.7	342.5
110°	93.4	117.6	325.0	716.5	791.0	716.5	325.0	117.6	93.4	117.6	325.0



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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°	104.1	126.8	315.1	684.9	779.6	684.9	315.1	126.8	104.1	126.8	315.1
115°	119.1	141.5	305.0	633.4	745.3	633.4	305.0	141.5	119.1	141.5	305.0
117.5°	133.8	155.0	301.0	583.9	696.7	583.9	301.0	155.0	133.8	155.0	301.0
120°	143.0	163.5	300.2	553.3	662.3	553.3	300.2	163.5	143.0	163.5	300.2
122.5°	152.1	171.9	300.2	528.8	630.3	528.8	300.2	171.9	152.1	171.9	300.2
125°	164.9	184.4	300.2	496.6	585.2	496.6	300.2	184.4	164.9	184.4	300.2
127.5°	176.1	194.9	300.2	471.7	547.2	471.7	300.2	194.9	176.1	194.9	300.2
130°	183.0	202.5	300.2	457.1	525.1	457.1	300.2	202.5	183.0	202.5	300.2
132.5°	189.8	209.4	299.4	445.5	506.8	445.5	299.4	209.4	189.8	209.4	299.4
135°	199.2	218.7	298.3	427.2	481.3	427.2	298.3	218.7	199.2	218.7	298.3
137.5°	208.3	228.8	298.1	409.8	458.0	409.8	298.1	228.8	208.3	228.8	298.1
140°	214.4	234.9	297.3	397.4	441.2	397.4	297.3	234.9	214.4	234.9	297.3
142.5°	222.1	241.8	298.1	385.2	426.0	385.2	298.1	241.8	222.1	241.8	298.1
145°	232.5	250.2	298.3	368.6	401.2	368.6	298.3	250.2	232.5	250.2	298.3
147.5°	243.0	258.1	298.5	354.0	380.6	354.0	298.5	258.1	243.0	258.1	298.5
150°	250.6	262.8	299.2	345.5	366.9	345.5	299.2	262.8	250.6	262.8	299.2
152.5°	256.7	267.4	299.2	338.5	356.2	338.5	299.2	267.4	256.7	267.4	299.2
155°	264.9	274.3	299.2	329.1	342.1	329.1	299.2	274.3	264.9	274.3	299.2
157.5°	273.7	280.0	300.2	323.3	332.2	323.3	300.2	280.0	273.7	280.0	300.2
160°	278.3	283.9	300.2	319.4	326.9	319.4	300.2	283.9	278.3	283.9	300.2
162.5°	282.9	287.0	300.2	316.3	321.5	316.3	300.2	287.0	282.9	287.0	300.2
165°	288.8	291.6	300.2	311.7	314.5	311.7	300.2	291.6	288.8	291.6	300.2
167.5°	294.3	295.0	301.2	308.5	310.9	308.5	301.2	295.0	294.3	295.0	301.2
170°	297.3	297.3	301.2	306.9	307.8	306.9	301.2	297.3	297.3	297.3	301.2
172.5°	298.9	299.6	301.2	305.4	305.5	305.4	301.2	299.6	298.9	299.6	301.2
175°	302.1	301.2	302.1	304.0	303.1	304.0	302.1	301.2	302.1	301.2	302.1
177.5°	303.1	302.3	302.3	303.8	302.3	303.8	302.3	302.3	303.1	302.3	302.3
180°	303.1	303.1	303.1	303.1	303.1	303.1	303.1	303.1	303.1	303.1	303.1



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2473.6	2473.6	2473.6	2473.6	2473.6	2473.6
2.5°	2454.4	2464.7	2464.7	2458.7	2487.9	2460.2
5°	2429.4	2453.1	2442.1	2441.9	2478.6	2451.2
7.5°	2411.8	2434.1	2423.8	2421.8	2457.8	2435.9
10°	2393.8	2410.2	2402.9	2408.3	2441.4	2419.5
12.5°	2368.5	2387.8	2380.5	2388.9	2419.1	2401.6
15°	2324.7	2341.2	2344.8	2348.6	2383.7	2365.4
17.5°	2252.5	2260.6	2278.8	2304.6	2341.1	2320.6
20°	2195.9	2206.8	2217.8	2262.8	2305.2	2283.3
22.5°	2131.4	2127.8	2153.3	2206.1	2259.0	2240.1
25°	1957.4	1817.0	1972.0	2108.0	2178.7	2173.3
27.5°	1362.9	1182.7	1342.1	1945.7	2094.4	2105.4
30°	1072.6	988.7	1070.8	1736.8	2032.1	2057.6
32.5°	952.3	894.7	944.7	1321.9	1953.5	2002.4
35°	821.8	781.6	821.8	988.7	1799.0	1912.1
37.5°	657.8	575.7	656.3	854.4	1454.3	1814.7
40°	490.1	386.2	475.5	764.8	1162.2	1738.6
42.5°	326.6	248.9	309.0	602.2	1005.3	1637.1
45°	176.7	154.8	169.4	363.8	820.4	1458.8
47.5°	138.6	146.6	138.6	229.5	627.6	1155.5
50°	133.0	158.6	133.0	177.2	519.2	874.9
52.5°	145.0	172.0	143.5	139.9	423.7	648.1
55°	164.3	253.7	166.2	113.8	310.7	436.5
57.5°	234.0	285.4	236.5	107.8	239.3	276.8
60°	240.3	307.8	238.5	113.8	185.1	205.2
62.5°	284.3	380.9	283.9	130.2	137.6	169.4
65°	364.6	401.1	368.2	166.0	98.2	153.0
67.5°	346.1	372.0	342.4	178.0	67.6	138.0
70°	340.0	360.0	336.3	203.3	62.8	115.7
72.5°	317.2	319.7	310.6	188.4	56.5	96.3
75°	245.9	229.5	236.7	162.3	56.5	82.1
77.5°	152.8	146.3	147.3	123.9	49.9	61.6
80°	115.6	111.9	110.1	104.5	46.6	46.6
82.5°	85.7	82.1	80.3	80.6	39.1	36.2
85°	39.1	35.4	33.6	46.6	27.8	20.5
87.5°	8.0	8.0	6.6	8.0	10.6	7.5
90°	2.9	2.9	2.9	2.9	0.9	0.0
92.5°	22.5	15.8	22.5	67.7	21.2	5.3
95°	81.3	52.4	81.3	219.2	48.8	16.2
97.5°	232.0	142.4	232.0	371.3	63.3	30.1
100°	385.8	250.6	385.8	423.1	71.7	40.0
102.5°	566.5	433.6	566.5	414.0	80.9	50.7
105°	718.8	689.0	718.8	377.4	93.7	66.7
107.5°	734.7	775.0	734.7	342.5	107.7	82.7
110°	716.5	791.0	716.5	325.0	117.6	93.4



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	684.9	779.6	684.9	315.1	126.8	104.1
115°	633.4	745.3	633.4	305.0	141.5	119.1
117.5°	583.9	696.7	583.9	301.0	155.0	133.8
120°	553.3	662.3	553.3	300.2	163.5	143.0
122.5°	528.8	630.3	528.8	300.2	171.9	152.1
125°	496.6	585.2	496.6	300.2	184.4	164.9
127.5°	471.7	547.2	471.7	300.2	194.9	176.1
130°	457.1	525.1	457.1	300.2	202.5	183.0
132.5°	445.5	506.8	445.5	299.4	209.4	189.8
135°	427.2	481.3	427.2	298.3	218.7	199.2
137.5°	409.8	458.0	409.8	298.1	228.8	208.3
140°	397.4	441.2	397.4	297.3	234.9	214.4
142.5°	385.2	426.0	385.2	298.1	241.8	222.1
145°	368.6	401.2	368.6	298.3	250.2	232.5
147.5°	354.0	380.6	354.0	298.5	258.1	243.0
150°	345.5	366.9	345.5	299.2	262.8	250.6
152.5°	338.5	356.2	338.5	299.2	267.4	256.7
155°	329.1	342.1	329.1	299.2	274.3	264.9
157.5°	323.3	332.2	323.3	300.2	280.0	273.7
160°	319.4	326.9	319.4	300.2	283.9	278.3
162.5°	316.3	321.5	316.3	300.2	287.0	282.9
165°	311.7	314.5	311.7	300.2	291.6	288.8
167.5°	308.5	310.9	308.5	301.2	295.0	294.3
170°	306.9	307.8	306.9	301.2	297.3	297.3
172.5°	305.4	305.5	305.4	301.2	299.6	298.9
175°	304.0	303.1	304.0	302.1	301.2	302.1
177.5°	303.8	302.3	303.8	302.3	302.3	303.1
180°	303.1	303.1	303.1	303.1	303.1	303.1



TEST NUMBER: P853758

CATALOG NUMBER: SQ2-FA-050U-100D-930-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	14.13	15.00	14.96	15.84	16.87	12.98	13.86	13.82	14.69	15.73
	3H	14.83	15.61	15.68	16.46	17.52	19.14	19.92	19.98	20.77	21.83
	4H	15.24	15.98	16.10	16.83	17.91	20.41	21.15	21.28	22.01	23.08
	6H	15.60	16.28	16.47	17.14	18.22	21.02	21.70	21.90	22.56	23.65
	8H	15.71	16.36	16.60	17.24	18.32	21.15	21.79	22.03	22.67	23.76
	12H	15.79	16.40	16.67	17.27	18.38	21.19	21.80	22.07	22.67	23.78
4H	2H	14.52	15.26	15.39	16.12	17.19	13.52	14.26	14.39	15.11	16.19
	3H	15.52	16.14	16.40	17.03	18.12	19.85	20.46	20.72	21.35	22.44
	4H	16.09	16.65	16.97	17.53	18.65	21.30	21.86	22.18	22.74	23.86
	6H	16.56	17.05	17.47	17.95	19.07	22.04	22.52	22.94	23.43	24.55
	8H	16.74	17.19	17.64	18.09	19.22	22.20	22.65	23.11	23.56	24.69
	12H	16.85	17.25	17.77	18.18	19.31	22.27	22.67	23.19	23.59	24.73
8H	4H	17.19	17.64	18.09	18.54	19.67	21.42	21.87	22.33	22.78	23.91
	6H	17.80	18.17	18.73	19.11	20.24	22.30	22.67	23.23	23.62	24.75
	8H	18.03	18.36	18.97	19.30	20.44	22.55	22.88	23.49	23.82	24.97
	12H	18.21	18.49	19.15	19.42	20.62	22.68	22.96	23.62	23.89	25.09
12H	4H	17.34	17.74	18.26	18.66	19.80	21.39	21.79	22.31	22.71	23.85
	6H	18.07	18.40	19.01	19.34	20.49	22.31	22.64	23.25	23.58	24.73
	8H	18.37	18.66	19.31	19.59	20.79	22.60	22.88	23.54	23.81	25.01