

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: P853760

Luminaire Tested: SQ2-FA-050U-100D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853760
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-940-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

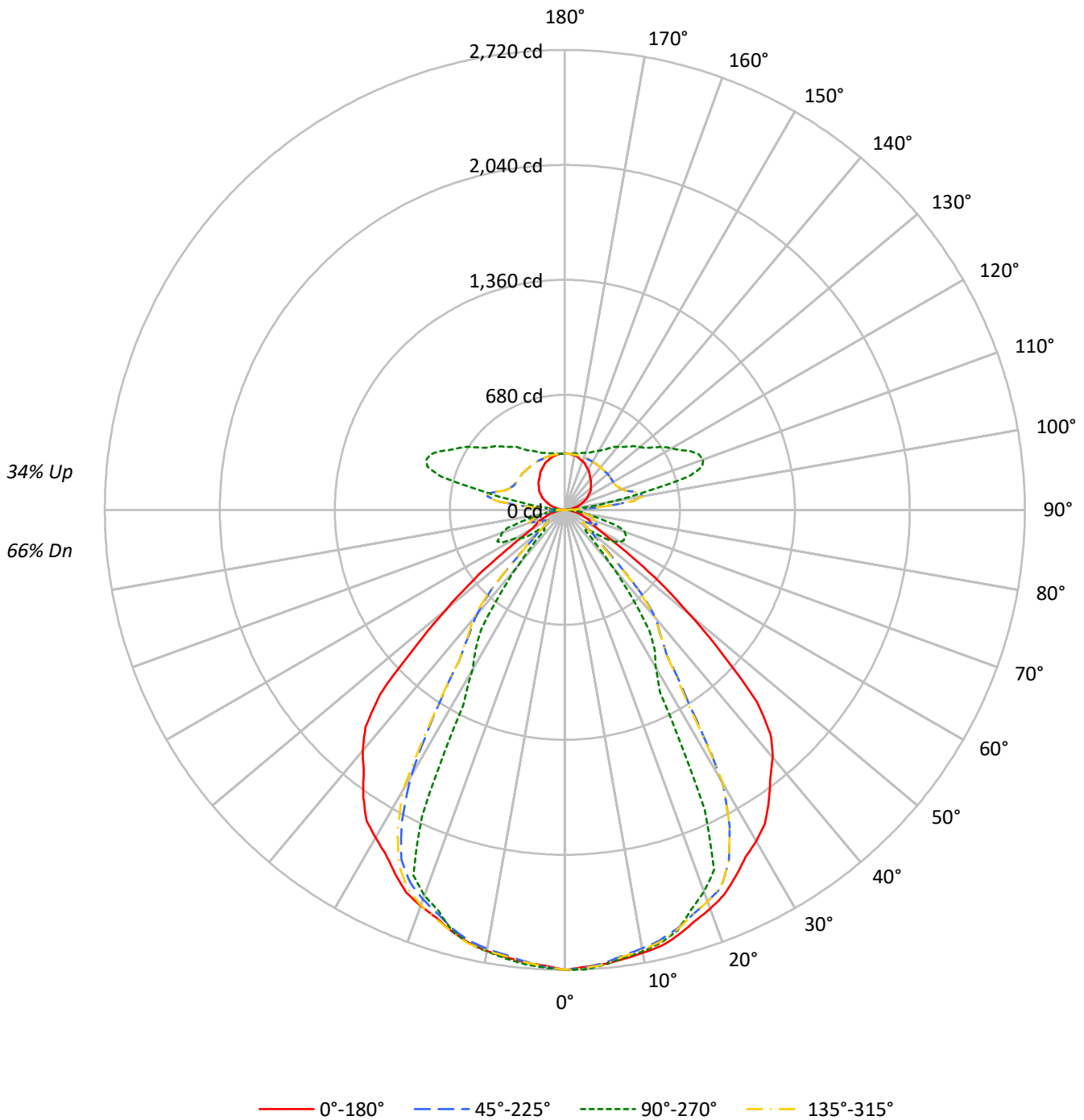
Lumens per Lamp: N/A
Luminaire Lumens: 6043.1 lumens
Efficiency: N/A
Efficacy: 115.3 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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			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°	43923	43923	43923	43923
5°	43692	43759	43527	43726
10°	43625	43458	43458	43458
15°	43483	43039	43141	43039
20°	43148	41314	42830	41701
25°	42580	34867	42287	35600
30°	42189	20005	41730	20273
35°	41449	17186	40923	16943
40°	40301	9038	39178	8951
45°	36634	3889	35321	3889
50°	24169	4690	22933	4381
55°	13515	8662	12822	7854
60°	7288	12190	7156	10931
65°	6426	14816	6739	16852
70°	6005	17722	5712	18694
75°	5633	15228	5758	15739
80°	4770	10869	4770	11446
85°	4187	6076	3798	7225

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 36634 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.0	4.2
10°-20°	726.3	12.0
20°-30°	990.3	16.4
30°-40°	832.2	13.8
40°-50°	472.7	7.8
50°-60°	250.8	4.1
60°-70°	230.9	3.8
70°-80°	169.5	2.8
80°-90°	44.7	0.7
90°-100°	132.7	2.2
100°-110°	421.1	7.0
110°-120°	412.9	6.8
120°-130°	336.0	5.6
130°-140°	273.9	4.5
140°-150°	213.6	3.5
150°-160°	153.9	2.5
160°-170°	94.0	1.6
170°-180°	31.7	0.5
0°-30°	1972.6	32.6
0°-40°	2804.8	46.4
0°-60°	3528.2	58.4
0°-90°	3973.3	65.7
90°-120°	966.7	16.0
90°-150°	1790.2	29.6
90°-180°	2070.0	34.3
0°-180°	6043.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2720	2720	2720	2720	2720	
5°	2696	2700	2686	2698	2696	256
15°	2601	2575	2581	2575	2601	733
25°	2390	1957	2374	1998	2390	1102
35°	2103	872	2076	860	2103	1313
45°	1604	170	1547	170	1604	1173
55°	480	308	456	279	480	462
65°	168	388	176	441	168	169
75°	90	244	92	252	90	93
85°	23	33	20	39	23	25
90°	0	3	0	3	0	2
95°	18	58	18	58	18	21
105°	73	758	73	758	73	77
115°	131	820	131	820	131	129
125°	181	644	181	644	181	161
135°	219	529	219	529	219	169
145°	256	441	256	441	256	160
155°	291	376	291	376	291	134
165°	318	346	318	346	318	90
175°	332	333	332	333	332	31
180°	333	333	333	333	333	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2720.4	2720.4	2720.4	2720.4	2720.4	2720.4	2720.4	2720.4	2720.4	2720.4	2720.4
2.5°	2705.7	2745.8	2710.6	2706.0	2720.4	2717.2	2712.2	2731.2	2699.1	2731.2	2705.7
5°	2695.8	2741.9	2689.7	2675.8	2699.9	2683.9	2697.9	2725.7	2685.6	2721.7	2681.4
7.5°	2679.0	2719.9	2657.2	2648.3	2672.0	2658.0	2663.8	2702.4	2668.7	2692.4	2656.0
10°	2660.9	2697.0	2634.3	2628.6	2650.7	2636.6	2642.5	2682.8	2650.7	2672.7	2636.3
12.5°	2641.2	2669.3	2606.4	2603.9	2622.8	2613.5	2616.2	2650.1	2624.4	2646.5	2611.7
15°	2601.4	2627.5	2564.5	2554.7	2574.8	2566.7	2570.7	2601.0	2580.9	2595.0	2564.5
17.5°	2552.2	2573.1	2510.3	2480.8	2481.6	2491.7	2510.3	2546.9	2528.8	2547.3	2504.2
20°	2511.2	2535.2	2466.0	2408.5	2404.5	2414.5	2466.0	2502.7	2492.7	2512.8	2451.7
22.5°	2463.6	2479.6	2416.8	2319.6	2306.0	2316.0	2410.2	2453.6	2450.0	2463.7	2387.7
25°	2390.1	2406.2	2291.6	2151.8	1957.2	2139.8	2295.7	2373.7	2373.7	2385.7	2285.5
27.5°	2315.4	2315.8	2108.6	1382.0	1219.1	1332.2	2105.8	2274.8	2294.1	2288.1	2091.0
30°	2262.9	2248.9	1869.0	1117.1	1073.0	1101.1	1871.1	2206.2	2238.3	2216.2	1821.8
32.5°	2202.2	2162.5	1379.9	1027.0	990.9	1015.8	1334.4	2124.7	2180.9	2133.1	1432.8
35°	2102.9	1998.6	1052.5	908.0	871.9	904.0	1044.3	1963.9	2076.2	1947.8	1087.4
37.5°	1995.8	1588.6	926.5	723.3	645.4	707.6	922.0	1571.6	1952.3	1535.1	925.7
40°	1912.1	1248.1	833.0	529.1	428.8	499.0	826.8	1190.8	1858.8	1281.0	812.4
42.5°	1800.5	1096.4	668.8	336.0	263.0	307.5	641.3	1071.0	1743.9	1110.0	646.7
45°	1604.4	942.4	396.0	184.3	170.3	178.3	365.2	925.0	1546.9	905.0	404.2
47.5°	1270.8	718.7	254.4	156.7	171.9	156.7	246.6	695.9	1200.2	694.7	254.0
50°	962.2	561.0	197.0	158.6	186.7	158.6	190.8	541.9	913.0	592.0	194.9
52.5°	712.7	468.8	160.8	173.9	224.4	177.1	156.3	456.4	676.6	477.6	152.2
55°	480.1	367.7	129.3	229.5	307.7	235.5	129.3	357.2	455.5	353.1	125.1
57.5°	304.5	273.6	130.9	295.1	351.2	300.7	132.9	263.7	292.1	264.9	114.9
60°	225.7	215.6	145.7	313.3	377.5	317.3	147.7	207.5	221.6	205.5	123.1
62.5°	186.3	169.8	175.2	339.3	392.3	330.5	178.9	162.0	193.7	155.2	136.2
65°	168.2	110.1	207.2	343.6	387.8	343.6	209.3	104.2	176.4	112.2	184.6
67.5°	151.8	81.6	200.2	341.3	390.2	342.1	195.3	77.9	145.7	75.9	188.7
70°	127.2	73.0	188.7	347.4	375.4	335.3	188.7	70.9	121.0	68.9	221.6
72.5°	105.9	69.4	175.6	320.7	332.8	308.7	177.3	69.0	106.3	62.1	208.4
75°	90.3	68.2	168.2	256.2	244.1	244.1	164.1	66.2	92.3	62.2	162.1
77.5°	67.7	60.5	139.5	167.2	158.0	158.0	137.0	58.4	64.4	54.8	131.7
80°	51.3	55.3	114.9	123.0	116.9	116.9	110.8	53.3	51.3	51.3	108.7
82.5°	39.8	47.0	88.6	90.2	85.8	84.2	86.2	46.6	39.8	43.0	84.1
85°	22.6	32.6	47.2	38.8	32.8	30.8	45.1	30.5	20.5	30.5	45.1
87.5°	8.2	14.8	7.2	7.2	7.2	7.2	7.2	14.8	8.2	13.2	8.8
90°	0.0	1.0	3.1	3.1	3.1	3.1	3.1	1.0	0.0	1.0	3.1
92.5°	5.9	23.3	74.4	24.8	17.4	24.8	74.4	23.3	5.9	23.3	74.4
95°	17.8	53.7	241.1	89.4	57.6	89.4	241.1	53.7	17.8	53.7	241.1
97.5°	33.1	69.6	408.3	255.2	156.6	255.2	408.3	69.6	33.1	69.6	408.3
100°	44.0	78.9	465.4	424.3	275.7	424.3	465.4	78.9	44.0	78.9	465.4
102.5°	55.8	89.0	455.3	623.0	476.9	623.0	455.3	89.0	55.8	89.0	455.3
105°	73.4	103.1	415.1	790.6	757.8	790.6	415.1	103.1	73.4	103.1	415.1
107.5°	91.0	118.4	376.7	808.0	852.3	808.0	376.7	118.4	91.0	118.4	376.7
110°	102.7	129.4	357.4	787.9	869.9	787.9	357.4	129.4	102.7	129.4	357.4



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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°	114.5	139.5	346.5	753.2	857.4	753.2	346.5	139.5	114.5	139.5	346.5
115°	131.0	155.6	335.4	696.6	819.6	696.6	335.4	155.6	131.0	155.6	335.4
117.5°	147.2	170.5	331.0	642.2	766.2	642.2	331.0	170.5	147.2	170.5	331.0
120°	157.2	179.8	330.2	608.5	728.4	608.5	330.2	179.8	157.2	179.8	330.2
122.5°	167.3	189.0	330.2	581.5	693.2	581.5	330.2	189.0	167.3	189.0	330.2
125°	181.3	202.8	330.2	546.2	643.5	546.2	330.2	202.8	181.3	202.8	330.2
127.5°	193.7	214.4	330.2	518.8	601.8	518.8	330.2	214.4	193.7	214.4	330.2
130°	201.2	222.8	330.2	502.7	577.5	502.7	330.2	222.8	201.2	222.8	330.2
132.5°	208.8	230.3	329.3	490.0	557.4	490.0	329.3	230.3	208.8	230.3	329.3
135°	219.1	240.6	328.1	469.9	529.3	469.9	328.1	240.6	219.1	240.6	328.1
137.5°	229.1	251.7	327.8	450.6	503.7	450.6	327.8	251.7	229.1	251.7	327.8
140°	235.8	258.4	327.0	437.1	485.3	437.1	327.0	258.4	235.8	258.4	327.0
142.5°	244.2	265.9	327.8	423.6	468.5	423.6	327.8	265.9	244.2	265.9	327.8
145°	255.7	275.2	328.1	405.4	441.3	405.4	328.1	275.2	255.7	275.2	328.1
147.5°	267.3	283.9	328.3	389.3	418.6	389.3	328.3	283.9	267.3	283.9	328.3
150°	275.7	289.0	329.1	380.0	403.5	380.0	329.1	289.0	275.7	289.0	329.1
152.5°	282.4	294.0	329.1	372.3	391.8	372.3	329.1	294.0	282.4	294.0	329.1
155°	291.4	301.6	329.1	361.9	376.3	361.9	329.1	301.6	291.4	301.6	329.1
157.5°	301.0	308.0	330.2	355.5	365.4	355.5	330.2	308.0	301.0	308.0	330.2
160°	306.0	312.2	330.2	351.3	359.5	351.3	330.2	312.2	306.0	312.2	330.2
162.5°	311.1	315.6	330.2	347.9	353.6	347.9	330.2	315.6	311.1	315.6	330.2
165°	317.6	320.7	330.2	342.8	345.9	342.8	330.2	320.7	317.6	320.7	330.2
167.5°	323.7	324.5	331.2	339.2	341.9	339.2	331.2	324.5	323.7	324.5	331.2
170°	327.0	327.0	331.2	337.5	338.5	337.5	331.2	327.0	327.0	327.0	331.2
172.5°	328.7	329.5	331.2	335.8	336.0	335.8	331.2	329.5	328.7	329.5	331.2
175°	332.3	331.2	332.3	334.3	333.3	334.3	332.3	331.2	332.3	331.2	332.3
177.5°	333.3	332.5	332.5	334.1	332.5	334.1	332.5	332.5	333.3	332.5	332.5
180°	333.3	333.3	333.3	333.3	333.3	333.3	333.3	333.3	333.3	333.3	333.3



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2720.4	2720.4	2720.4	2720.4	2720.4	2720.4
2.5°	2699.3	2710.6	2710.6	2704.0	2736.1	2705.7
5°	2671.8	2697.9	2685.8	2685.6	2725.9	2695.8
7.5°	2652.5	2676.9	2665.7	2663.4	2703.1	2679.0
10°	2632.6	2650.7	2642.7	2648.6	2685.0	2660.9
12.5°	2604.8	2626.1	2618.0	2627.3	2660.5	2641.2
15°	2556.7	2574.8	2578.8	2583.0	2621.5	2601.4
17.5°	2477.3	2486.1	2506.2	2534.6	2574.7	2552.2
20°	2415.0	2427.0	2439.1	2488.6	2535.2	2511.2
22.5°	2344.1	2340.1	2368.1	2426.2	2484.4	2463.6
25°	2152.7	1998.3	2168.8	2318.3	2396.1	2390.1
27.5°	1498.9	1300.7	1476.0	2139.8	2303.4	2315.4
30°	1179.6	1087.4	1177.6	1910.0	2234.8	2262.9
32.5°	1047.3	984.0	1038.9	1453.8	2148.4	2202.2
35°	903.8	859.6	903.8	1087.4	1978.5	2102.9
37.5°	723.4	633.1	721.8	939.6	1599.4	1995.8
40°	539.0	424.7	523.0	841.2	1278.2	1912.1
42.5°	359.1	273.7	339.9	662.3	1105.6	1800.5
45°	194.4	170.3	186.3	400.1	902.3	1604.4
47.5°	152.4	161.3	152.4	252.3	690.2	1270.8
50°	146.3	174.4	146.3	194.9	571.0	962.2
52.5°	159.5	189.2	157.9	153.9	466.0	712.7
55°	180.7	279.0	182.7	125.1	341.7	480.1
57.5°	257.3	313.9	260.1	118.6	263.1	304.5
60°	264.3	338.5	262.3	125.1	203.6	225.7
62.5°	312.6	418.9	312.2	143.2	151.4	186.3
65°	401.0	441.1	405.0	182.6	108.1	168.2
67.5°	380.6	409.1	376.6	195.7	74.4	151.8
70°	373.9	396.0	369.9	223.6	69.0	127.2
72.5°	348.8	351.6	341.6	207.2	62.1	105.9
75°	270.4	252.3	260.4	178.5	62.2	90.3
77.5°	168.1	160.8	162.0	136.2	54.9	67.7
80°	127.1	123.1	121.1	114.9	51.3	51.3
82.5°	94.3	90.3	88.3	88.6	43.0	39.8
85°	43.0	39.0	37.0	51.3	30.6	22.6
87.5°	8.8	8.8	7.2	8.8	11.6	8.2
90°	3.1	3.1	3.1	3.1	1.0	0.0
92.5°	24.8	17.4	24.8	74.4	23.3	5.9
95°	89.4	57.6	89.4	241.1	53.7	17.8
97.5°	255.2	156.6	255.2	408.3	69.6	33.1
100°	424.3	275.7	424.3	465.4	78.9	44.0
102.5°	623.0	476.9	623.0	455.3	89.0	55.8
105°	790.6	757.8	790.6	415.1	103.1	73.4
107.5°	808.0	852.3	808.0	376.7	118.4	91.0
110°	787.9	869.9	787.9	357.4	129.4	102.7



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	753.2	857.4	753.2	346.5	139.5	114.5
115°	696.6	819.6	696.6	335.4	155.6	131.0
117.5°	642.2	766.2	642.2	331.0	170.5	147.2
120°	608.5	728.4	608.5	330.2	179.8	157.2
122.5°	581.5	693.2	581.5	330.2	189.0	167.3
125°	546.2	643.5	546.2	330.2	202.8	181.3
127.5°	518.8	601.8	518.8	330.2	214.4	193.7
130°	502.7	577.5	502.7	330.2	222.8	201.2
132.5°	490.0	557.4	490.0	329.3	230.3	208.8
135°	469.9	529.3	469.9	328.1	240.6	219.1
137.5°	450.6	503.7	450.6	327.8	251.7	229.1
140°	437.1	485.3	437.1	327.0	258.4	235.8
142.5°	423.6	468.5	423.6	327.8	265.9	244.2
145°	405.4	441.3	405.4	328.1	275.2	255.7
147.5°	389.3	418.6	389.3	328.3	283.9	267.3
150°	380.0	403.5	380.0	329.1	289.0	275.7
152.5°	372.3	391.8	372.3	329.1	294.0	282.4
155°	361.9	376.3	361.9	329.1	301.6	291.4
157.5°	355.5	365.4	355.5	330.2	308.0	301.0
160°	351.3	359.5	351.3	330.2	312.2	306.0
162.5°	347.9	353.6	347.9	330.2	315.6	311.1
165°	342.8	345.9	342.8	330.2	320.7	317.6
167.5°	339.2	341.9	339.2	331.2	324.5	323.7
170°	337.5	338.5	337.5	331.2	327.0	327.0
172.5°	335.8	336.0	335.8	331.2	329.5	328.7
175°	334.3	333.3	334.3	332.3	331.2	332.3
177.5°	334.1	332.5	334.1	332.5	332.5	333.3
180°	333.3	333.3	333.3	333.3	333.3	333.3



TEST NUMBER: P853760

CATALOG NUMBER: SQ2-FA-050U-100D-940-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	14.46	15.33	15.29	16.17	17.20	13.31	14.19	14.15	15.02	16.06
	3H	15.16	15.94	16.01	16.79	17.85	19.47	20.25	20.31	21.10	22.16
	4H	15.57	16.31	16.43	17.16	18.24	20.74	21.48	21.61	22.34	23.41
	6H	15.93	16.61	16.80	17.47	18.55	21.35	22.03	22.23	22.89	23.98
	8H	16.05	16.69	16.93	17.57	18.66	21.48	22.12	22.36	23.00	24.09
	12H	16.12	16.73	17.00	17.60	18.71	21.52	22.13	22.40	23.00	24.12
4H	2H	14.85	15.59	15.72	16.45	17.52	13.85	14.59	14.72	15.44	16.52
	3H	15.85	16.47	16.73	17.36	18.44	20.18	20.79	21.05	21.68	22.77
	4H	16.42	16.98	17.30	17.86	18.98	21.63	22.19	22.51	23.07	24.19
	6H	16.90	17.38	17.80	18.28	19.40	22.37	22.85	23.27	23.76	24.88
	8H	17.07	17.52	17.97	18.42	19.55	22.54	22.98	23.44	23.89	25.02
	12H	17.18	17.59	18.10	18.51	19.64	22.60	23.00	23.52	23.92	25.06
8H	4H	17.52	17.97	18.42	18.87	20.00	21.75	22.20	22.66	23.11	24.24
	6H	18.13	18.50	19.06	19.44	20.57	22.63	23.00	23.56	23.95	25.08
	8H	18.36	18.69	19.30	19.63	20.78	22.88	23.21	23.82	24.15	25.30
	12H	18.54	18.82	19.48	19.75	20.95	23.01	23.29	23.95	24.22	25.42
12H	4H	17.67	18.07	18.59	18.99	20.13	21.72	22.12	22.64	23.04	24.18
	6H	18.40	18.73	19.34	19.67	20.82	22.64	22.97	23.58	23.91	25.06
	8H	18.71	18.99	19.65	19.92	21.12	22.93	23.21	23.87	24.14	25.34