

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: P853761

Luminaire Tested: SQ2-FA-050U-125D-930-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853761
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-930-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

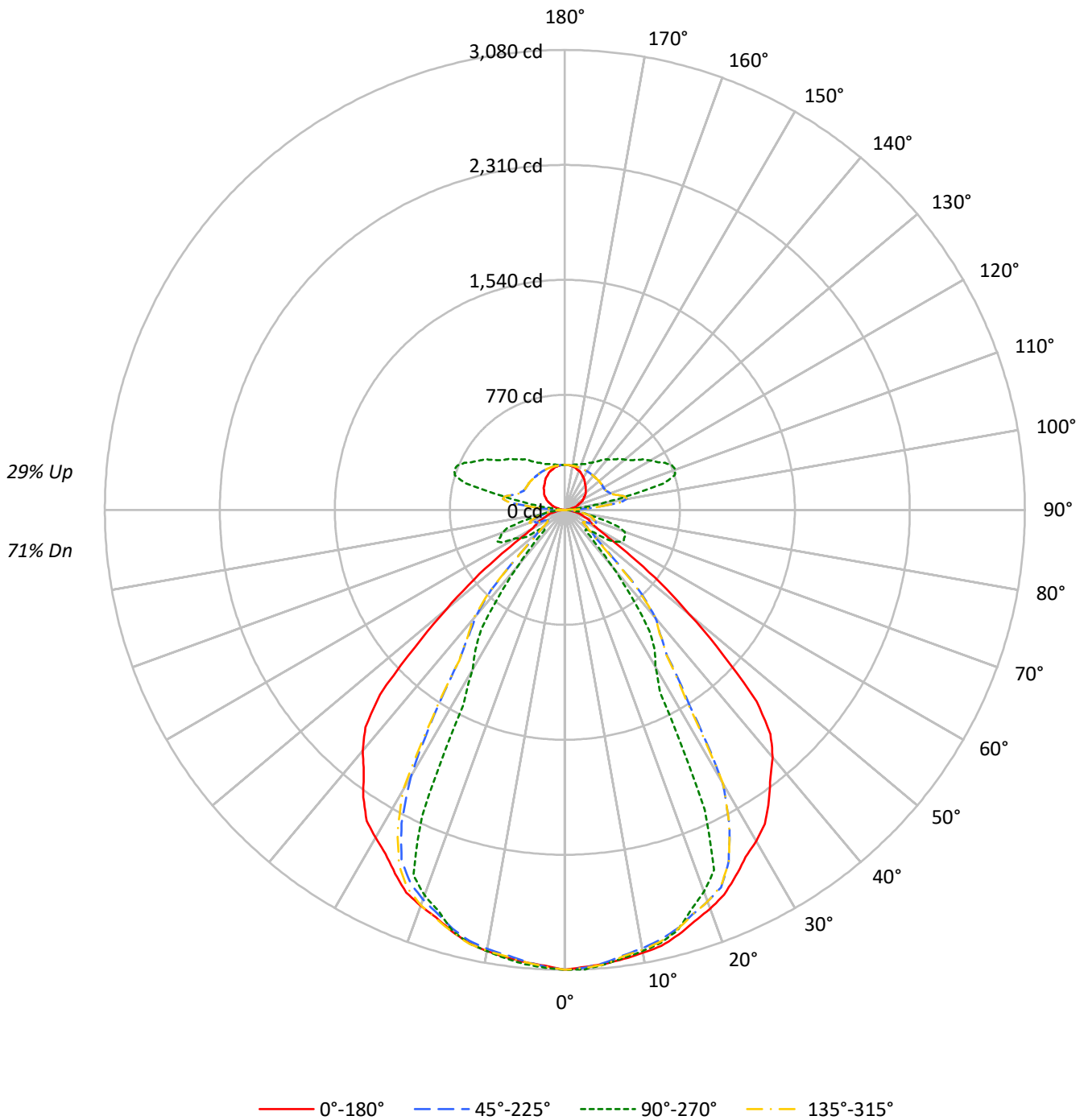
Lumens per Lamp: N/A
Luminaire Lumens: 6373.9 lumens
Efficiency: N/A
Efficacy: 99.6 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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°	49729	49729	49729	49729
5°	49469	49543	49279	49506
10°	49393	49201	49201	49201
15°	49232	48727	48844	48727
20°	48850	46775	48491	47215
25°	48209	39476	47878	40305
30°	47765	22648	47247	22952
35°	46929	19458	46333	19184
40°	45627	10233	44356	10134
45°	41475	4402	39991	4402
50°	27364	5310	25962	4958
55°	15299	9807	14517	8892
60°	8251	13801	8102	12377
65°	7278	16772	7633	19079
70°	6798	20068	6467	21163
75°	6376	17243	6519	17823
80°	5402	12311	5402	12961
85°	4742	6891	4298	8170

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 41475 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	289.9	4.5
10°-20°	822.3	12.9
20°-30°	1121.2	17.6
30°-40°	942.2	14.8
40°-50°	535.1	8.4
50°-60°	283.9	4.5
60°-70°	261.4	4.1
70°-80°	191.9	3.0
80°-90°	50.5	0.8
90°-100°	120.3	1.9
100°-110°	381.5	6.0
110°-120°	374.1	5.9
120°-130°	304.4	4.8
130°-140°	248.2	3.9
140°-150°	193.5	3.0
150°-160°	139.4	2.2
160°-170°	85.2	1.3
170°-180°	28.8	0.5
0°-30°	2233.3	35.0
0°-40°	3175.5	49.8
0°-60°	3994.6	62.7
0°-90°	4498.5	70.6
90°-120°	875.9	13.7
90°-150°	1622.1	25.4
90°-180°	1875.0	29.4
0°-180°	6373.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3080	3080	3080	3080	3080	
5°	3052	3057	3040	3054	3052	290
15°	2945	2915	2922	2915	2945	830
25°	2706	2216	2688	2262	2706	1248
35°	2381	987	2351	973	2381	1486
45°	1816	193	1751	193	1816	1328
55°	544	348	516	316	544	524
65°	190	439	200	499	190	191
75°	102	276	104	286	102	105
85°	26	37	23	44	26	28
90°	0	3	0	3	0	2
95°	16	52	16	52	16	19
105°	66	687	66	687	66	70
115°	119	743	119	743	119	117
125°	164	583	164	583	164	146
135°	198	480	198	480	198	153
145°	232	400	232	400	232	145
155°	264	341	264	341	264	122
165°	288	313	288	313	288	81
175°	301	302	301	302	301	29
180°	302	302	302	302	302	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3080.0	3080.0	3080.0	3080.0	3080.0	3080.0	3080.0	3080.0	3080.0	3080.0	3080.0
2.5°	3063.3	3108.7	3068.9	3063.7	3080.0	3076.4	3070.7	3092.2	3055.9	3092.2	3063.3
5°	3052.2	3104.4	3045.2	3029.5	3056.8	3038.6	3054.5	3086.0	3040.5	3081.4	3035.9
7.5°	3033.1	3079.4	3008.5	2998.4	3025.2	3009.3	3015.9	3059.6	3021.5	3048.3	3007.1
10°	3012.7	3053.5	2982.5	2976.1	3001.0	2985.2	2991.8	3037.4	3001.0	3026.0	2984.8
12.5°	2990.4	3022.2	2950.9	2948.1	2969.5	2959.0	2962.0	3000.4	2971.3	2996.3	2956.9
15°	2945.3	2974.8	2903.5	2892.4	2915.1	2906.0	2910.5	2944.8	2922.1	2938.0	2903.5
17.5°	2889.6	2913.2	2842.2	2808.7	2809.7	2821.0	2842.2	2883.5	2863.1	2884.0	2835.2
20°	2843.1	2870.4	2792.0	2726.9	2722.3	2733.7	2792.0	2833.5	2822.2	2844.9	2775.7
22.5°	2789.2	2807.4	2736.3	2626.3	2610.8	2622.2	2728.8	2778.0	2773.9	2789.3	2703.3
25°	2706.1	2724.2	2594.6	2436.2	2215.9	2422.6	2599.2	2687.5	2687.5	2701.1	2587.6
27.5°	2621.5	2622.0	2387.4	1564.6	1380.2	1508.3	2384.1	2575.5	2597.3	2590.5	2367.4
30°	2562.0	2546.1	2116.1	1264.8	1214.8	1246.6	2118.4	2497.8	2534.2	2509.2	2062.6
32.5°	2493.3	2448.3	1562.3	1162.8	1121.9	1150.1	1510.7	2405.5	2469.1	2415.1	1622.2
35°	2380.9	2262.8	1191.6	1028.1	987.2	1023.5	1182.3	2223.5	2350.7	2205.3	1231.1
37.5°	2259.6	1798.6	1049.0	818.9	730.8	801.2	1043.9	1779.3	2210.4	1738.0	1048.0
40°	2164.8	1413.1	943.1	599.0	485.5	565.0	936.1	1348.1	2104.5	1450.4	919.8
42.5°	2038.5	1241.3	757.2	380.5	297.8	348.2	726.1	1212.6	1974.4	1256.7	732.1
45°	1816.4	1066.9	448.3	208.7	192.8	201.9	413.5	1047.3	1751.4	1024.6	457.6
47.5°	1438.7	813.7	288.0	177.4	194.7	177.4	279.2	787.9	1358.8	786.5	287.6
50°	1089.4	635.2	223.0	179.6	211.4	179.6	216.0	613.5	1033.6	670.3	220.7
52.5°	806.9	530.8	182.1	196.9	254.1	200.5	177.0	516.7	766.1	540.8	172.4
55°	543.5	416.3	146.3	259.8	348.4	266.7	146.3	404.4	515.7	399.8	141.7
57.5°	344.7	309.7	148.2	334.1	397.7	340.4	150.5	298.5	330.8	299.9	130.1
60°	255.5	244.2	164.9	354.7	427.4	359.3	167.2	235.0	250.9	232.7	139.4
62.5°	210.9	192.3	198.4	384.2	444.1	374.2	202.5	183.4	219.3	175.7	154.2
65°	190.5	124.6	234.6	389.0	439.0	389.0	236.9	118.0	199.8	127.1	209.1
67.5°	171.9	92.4	226.7	386.4	441.8	387.3	221.1	88.2	164.9	85.9	213.7
70°	144.0	82.7	213.7	393.3	425.1	379.6	213.7	80.3	137.0	78.0	250.9
72.5°	119.9	78.5	198.8	363.1	376.8	349.5	200.7	78.1	120.3	70.4	236.0
75°	102.2	77.2	190.5	290.0	276.4	276.4	185.8	75.0	104.5	70.5	183.5
77.5°	76.7	68.5	157.9	189.3	178.9	178.9	155.2	66.1	72.9	62.0	149.1
80°	58.1	62.6	130.1	139.2	132.4	132.4	125.4	60.3	58.1	58.1	123.1
82.5°	45.1	53.2	100.3	102.1	97.1	95.3	97.6	52.8	45.1	48.7	95.2
85°	25.6	36.9	53.4	44.0	37.2	34.9	51.1	34.6	23.2	34.6	51.1
87.5°	9.3	16.7	8.0	8.0	8.0	8.0	8.0	16.7	9.3	14.9	9.9
90°	0.0	0.9	2.8	2.8	2.8	2.8	2.8	0.9	0.0	0.9	2.8
92.5°	5.3	21.1	67.4	22.5	15.8	22.5	67.4	21.1	5.3	21.1	67.4
95°	16.1	48.6	218.4	81.0	52.2	81.0	218.4	48.6	16.1	48.6	218.4
97.5°	30.0	63.1	370.0	231.2	141.9	231.2	370.0	63.1	30.0	63.1	370.0
100°	39.9	71.5	421.7	384.4	249.8	384.4	421.7	71.5	39.9	71.5	421.7
102.5°	50.5	80.6	412.6	564.5	432.1	564.5	412.6	80.6	50.5	80.6	412.6
105°	66.5	93.4	376.1	716.4	686.6	716.4	376.1	93.4	66.5	93.4	376.1
107.5°	82.4	107.3	341.3	732.2	772.3	732.2	341.3	107.3	82.4	107.3	341.3
110°	93.1	117.2	323.9	714.0	788.3	714.0	323.9	117.2	93.1	117.2	323.9



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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°	103.7	126.4	314.0	682.5	776.9	682.5	314.0	126.4	103.7	126.4	314.0
115°	118.7	141.0	303.9	631.2	742.7	631.2	303.9	141.0	118.7	141.0	303.9
117.5°	133.3	154.5	299.9	581.9	694.2	581.9	299.9	154.5	133.3	154.5	299.9
120°	142.5	162.9	299.2	551.4	660.0	551.4	299.2	162.9	142.5	162.9	299.2
122.5°	151.6	171.3	299.2	526.9	628.1	526.9	299.2	171.3	151.6	171.3	299.2
125°	164.3	183.8	299.2	494.9	583.1	494.9	299.2	183.8	164.3	183.8	299.2
127.5°	175.5	194.3	299.2	470.1	545.3	470.1	299.2	194.3	175.5	194.3	299.2
130°	182.3	201.8	299.2	455.5	523.3	455.5	299.2	201.8	182.3	201.8	299.2
132.5°	189.2	208.7	298.4	444.0	505.1	444.0	298.4	208.7	189.2	208.7	298.4
135°	198.5	218.0	297.3	425.7	479.6	425.7	297.3	218.0	198.5	218.0	297.3
137.5°	207.6	228.0	297.1	408.3	456.4	408.3	297.1	228.0	207.6	228.0	297.1
140°	213.7	234.1	296.3	396.1	439.7	396.1	296.3	234.1	213.7	234.1	296.3
142.5°	221.3	241.0	297.1	383.8	424.5	383.8	297.1	241.0	221.3	241.0	297.1
145°	231.7	249.4	297.3	367.3	399.8	367.3	297.3	249.4	231.7	249.4	297.3
147.5°	242.2	257.2	297.4	352.8	379.3	352.8	297.4	257.2	242.2	257.2	297.4
150°	249.8	261.8	298.2	344.3	365.6	344.3	298.2	261.8	249.8	261.8	298.2
152.5°	255.9	266.4	298.2	337.4	355.0	337.4	298.2	266.4	255.9	266.4	298.2
155°	264.0	273.3	298.2	327.9	340.9	327.9	298.2	273.3	264.0	273.3	298.2
157.5°	272.8	279.1	299.2	322.2	331.1	322.2	299.2	279.1	272.8	279.1	299.2
160°	277.3	282.9	299.2	318.3	325.8	318.3	299.2	282.9	277.3	282.9	299.2
162.5°	281.9	286.0	299.2	315.2	320.4	315.2	299.2	286.0	281.9	286.0	299.2
165°	287.8	290.5	299.2	310.6	313.4	310.6	299.2	290.5	287.8	290.5	299.2
167.5°	293.3	294.0	300.1	307.4	309.8	307.4	300.1	294.0	293.3	294.0	300.1
170°	296.3	296.3	300.1	305.8	306.8	305.8	300.1	296.3	296.3	296.3	300.1
172.5°	297.8	298.6	300.1	304.3	304.5	304.3	300.1	298.6	297.8	298.6	300.1
175°	301.1	300.1	301.1	302.9	302.0	302.9	301.1	300.1	301.1	300.1	301.1
177.5°	302.0	301.3	301.2	302.7	301.2	302.7	301.2	301.3	302.0	301.3	301.2
180°	302.0	302.0	302.0	302.0	302.0	302.0	302.0	302.0	302.0	302.0	302.0



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3080.0	3080.0	3080.0	3080.0	3080.0	3080.0
2.5°	3056.2	3068.9	3068.9	3061.4	3097.8	3063.3
5°	3024.9	3054.5	3040.8	3040.5	3086.2	3052.2
7.5°	3003.1	3030.8	3018.1	3015.5	3060.4	3033.1
10°	2980.6	3001.0	2992.0	2998.7	3039.9	3012.7
12.5°	2949.1	2973.2	2964.1	2974.6	3012.2	2990.4
15°	2894.7	2915.1	2919.6	2924.4	2968.0	2945.3
17.5°	2804.8	2814.8	2837.5	2869.6	2915.0	2889.6
20°	2734.2	2747.9	2761.5	2817.5	2870.4	2843.1
22.5°	2653.9	2649.4	2681.2	2746.9	2812.8	2789.2
25°	2437.3	2262.4	2455.5	2624.8	2712.9	2706.1
27.5°	1697.0	1472.7	1671.2	2422.7	2607.9	2621.5
30°	1335.6	1231.1	1333.3	2162.5	2530.2	2562.0
32.5°	1185.8	1114.0	1176.2	1645.9	2432.4	2493.3
35°	1023.2	973.3	1023.2	1231.1	2240.1	2380.9
37.5°	819.0	716.8	817.2	1063.8	1810.8	2259.6
40°	610.3	480.8	592.1	952.3	1447.2	2164.8
42.5°	406.6	309.9	384.8	749.8	1251.7	2038.5
45°	220.0	192.8	211.0	452.9	1021.5	1816.4
47.5°	172.6	182.6	172.6	285.7	781.5	1438.7
50°	165.6	197.4	165.6	220.7	646.5	1089.4
52.5°	180.5	214.2	178.7	174.2	527.6	806.9
55°	204.6	315.9	206.9	141.7	386.8	543.5
57.5°	291.3	355.4	294.5	134.3	297.9	344.7
60°	299.2	383.3	297.0	141.7	230.5	255.5
62.5°	353.9	474.3	353.5	162.1	171.4	210.9
65°	454.0	499.4	458.5	206.7	122.3	190.5
67.5°	430.9	463.2	426.4	221.6	84.2	171.9
70°	423.3	448.3	418.8	253.2	78.1	144.0
72.5°	394.9	398.1	386.8	234.6	70.3	119.9
75°	306.1	285.7	294.8	202.1	70.4	102.2
77.5°	190.3	182.1	183.5	154.2	62.1	76.7
80°	143.9	139.4	137.1	130.1	58.1	58.1
82.5°	106.7	102.2	99.9	100.3	48.7	45.1
85°	48.7	44.1	41.9	58.1	34.6	25.6
87.5°	9.9	9.9	8.0	9.9	13.1	9.3
90°	2.8	2.8	2.8	2.8	0.9	0.0
92.5°	22.5	15.8	22.5	67.4	21.1	5.3
95°	81.0	52.2	81.0	218.4	48.6	16.1
97.5°	231.2	141.9	231.2	370.0	63.1	30.0
100°	384.4	249.8	384.4	421.7	71.5	39.9
102.5°	564.5	432.1	564.5	412.6	80.6	50.5
105°	716.4	686.6	716.4	376.1	93.4	66.5
107.5°	732.2	772.3	732.2	341.3	107.3	82.4
110°	714.0	788.3	714.0	323.9	117.2	93.1



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	682.5	776.9	682.5	314.0	126.4	103.7
115°	631.2	742.7	631.2	303.9	141.0	118.7
117.5°	581.9	694.2	581.9	299.9	154.5	133.3
120°	551.4	660.0	551.4	299.2	162.9	142.5
122.5°	526.9	628.1	526.9	299.2	171.3	151.6
125°	494.9	583.1	494.9	299.2	183.8	164.3
127.5°	470.1	545.3	470.1	299.2	194.3	175.5
130°	455.5	523.3	455.5	299.2	201.8	182.3
132.5°	444.0	505.1	444.0	298.4	208.7	189.2
135°	425.7	479.6	425.7	297.3	218.0	198.5
137.5°	408.3	456.4	408.3	297.1	228.0	207.6
140°	396.1	439.7	396.1	296.3	234.1	213.7
142.5°	383.8	424.5	383.8	297.1	241.0	221.3
145°	367.3	399.8	367.3	297.3	249.4	231.7
147.5°	352.8	379.3	352.8	297.4	257.2	242.2
150°	344.3	365.6	344.3	298.2	261.8	249.8
152.5°	337.4	355.0	337.4	298.2	266.4	255.9
155°	327.9	340.9	327.9	298.2	273.3	264.0
157.5°	322.2	331.1	322.2	299.2	279.1	272.8
160°	318.3	325.8	318.3	299.2	282.9	277.3
162.5°	315.2	320.4	315.2	299.2	286.0	281.9
165°	310.6	313.4	310.6	299.2	290.5	287.8
167.5°	307.4	309.8	307.4	300.1	294.0	293.3
170°	305.8	306.8	305.8	300.1	296.3	296.3
172.5°	304.3	304.5	304.3	300.1	298.6	297.8
175°	302.9	302.0	302.9	301.1	300.1	301.1
177.5°	302.7	301.2	302.7	301.2	301.3	302.0
180°	302.0	302.0	302.0	302.0	302.0	302.0



TEST NUMBER: P853761

CATALOG NUMBER: SQ2-FA-050U-125D-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	15.28	16.20	16.07	16.98	17.94	14.14	15.06	14.92	15.84	16.79
	3H	15.99	16.81	16.78	17.60	18.59	20.30	21.12	21.09	21.91	22.90
	4H	16.40	17.17	17.21	17.98	18.97	21.57	22.35	22.39	23.15	24.15
	6H	16.76	17.47	17.58	18.28	19.29	22.18	22.90	23.01	23.71	24.72
	8H	16.88	17.55	17.71	18.38	19.39	22.31	22.99	23.14	23.82	24.82
	12H	16.95	17.60	17.79	18.42	19.45	22.35	23.00	23.19	23.82	24.85
4H	2H	15.69	16.46	16.50	17.26	18.26	14.68	15.45	15.50	16.26	17.25
	3H	16.69	17.33	17.51	18.17	19.18	21.01	21.65	21.84	22.49	23.50
	4H	17.25	17.84	18.09	18.67	19.71	22.46	23.05	23.30	23.88	24.92
	6H	17.73	18.23	18.58	19.10	20.14	23.20	23.71	24.06	24.57	25.61
	8H	17.90	18.37	18.76	19.23	20.28	23.37	23.84	24.23	24.70	25.75
	12H	18.02	18.44	18.90	19.32	20.38	23.44	23.86	24.31	24.73	25.79
8H	4H	18.36	18.83	19.21	19.68	20.74	22.59	23.06	23.45	23.92	24.97
	6H	18.97	19.35	19.85	20.25	21.31	23.47	23.86	24.35	24.76	25.81
	8H	19.20	19.54	20.10	20.44	21.51	23.72	24.06	24.62	24.96	26.03
	12H	19.38	19.68	20.27	20.56	21.69	23.85	24.15	24.74	25.03	26.16
12H	4H	18.50	18.93	19.38	19.80	20.86	22.56	22.98	23.43	23.85	24.91
	6H	19.24	19.58	20.14	20.48	21.55	23.48	23.82	24.38	24.72	25.79
	8H	19.54	19.84	20.44	20.73	21.85	23.77	24.06	24.66	24.95	26.08