

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: P853763

Luminaire Tested: SQ2-FA-050U-125D-940-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P853763  
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-940-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1250 LUMENS PER FOOT  
UPLIGHT 500 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

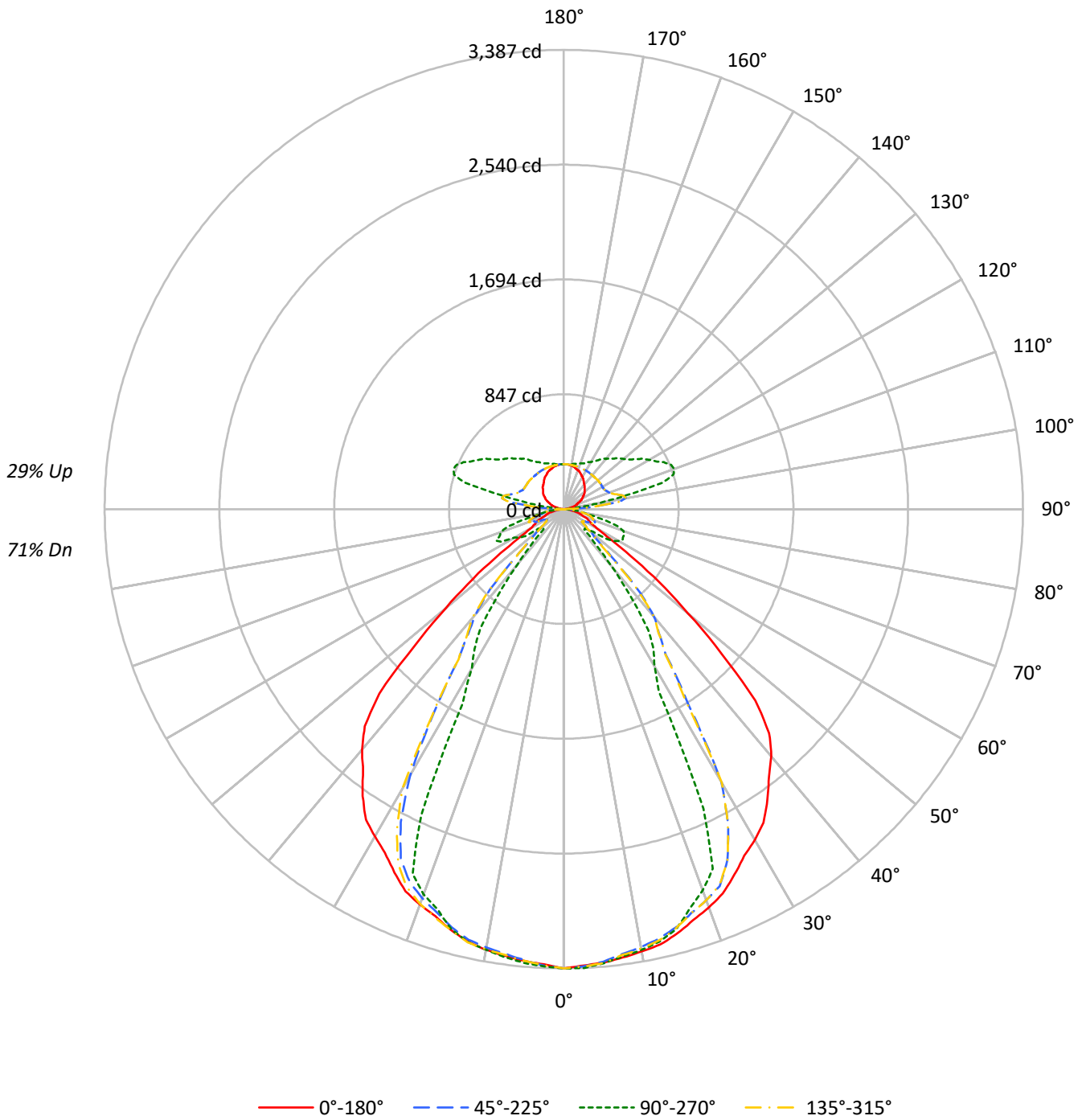
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7009.9 lumens  
Efficiency: N/A  
Efficacy: 109.5 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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CATALOG NUMBER: SQ2-FA-050U-125D-940-UNV-STD-W-4

### 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	0	
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°	54692	54692	54692	54692
5°	54404	54486	54196	54446
10°	54321	54111	54111	54111
15°	54145	53590	53717	53590
20°	53725	51441	53330	51924
25°	53019	43417	52654	44325
30°	52532	24908	51960	25242
35°	51610	21400	50955	21098
40°	50182	11253	48780	11145
45°	45615	4841	43980	4841
50°	30094	5840	28555	5453
55°	16828	10787	15964	9779
60°	9074	15177	8909	13611
65°	8004	18445	8393	20982
70°	7478	22069	7114	23273
75°	7012	18964	7174	19601
80°	5941	13538	5941	14254
85°	5206	7577	4724	8985

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 45615 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	318.8	4.5
10°-20°	904.3	12.9
20°-30°	1233.1	17.6
30°-40°	1036.2	14.8
40°-50°	588.5	8.4
50°-60°	312.3	4.5
60°-70°	287.5	4.1
70°-80°	211.1	3.0
80°-90°	55.6	0.8
90°-100°	132.3	1.9
100°-110°	419.6	6.0
110°-120°	411.4	5.9
120°-130°	334.8	4.8
130°-140°	273.0	3.9
140°-150°	212.8	3.0
150°-160°	153.3	2.2
160°-170°	93.7	1.3
170°-180°	31.6	0.5
0°-30°	2456.2	35.0
0°-40°	3492.4	49.8
0°-60°	4393.2	62.7
0°-90°	4947.3	70.6
90°-120°	963.3	13.7
90°-150°	1783.9	25.4
90°-180°	2063.0	29.4
0°-180°	7009.9	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	3387	3387	3387	3387	3387	
5°	3357	3362	3344	3359	3357	319
15°	3239	3206	3214	3206	3239	913
25°	2976	2437	2956	2488	2976	1372
35°	2618	1086	2585	1070	2618	1635
45°	1998	212	1926	212	1998	1461
55°	598	383	567	347	598	576
65°	210	483	220	549	210	210
75°	112	304	115	314	112	116
85°	28	41	26	48	28	31
90°	0	3	0	3	0	2
95°	18	57	18	57	18	21
105°	73	755	73	755	73	77
115°	131	817	131	817	131	129
125°	181	641	181	641	181	161
135°	218	528	218	528	218	169
145°	255	440	255	440	255	160
155°	290	375	290	375	290	134
165°	316	345	316	345	316	89
175°	331	332	331	332	331	31
180°	332	332	332	332	332	



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CATALOG NUMBER: SQ2-FA-050U-125D-940-UNV-STD-W-4

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3387.4	3387.4	3387.4	3387.4	3387.4	3387.4	3387.4	3387.4	3387.4	3387.4	3387.4
2.5°	3369.0	3418.9	3375.1	3369.4	3387.4	3383.4	3377.1	3400.7	3360.8	3400.7	3369.0
5°	3356.7	3414.1	3349.0	3331.8	3361.8	3341.8	3359.3	3393.9	3343.9	3388.9	3338.8
7.5°	3335.7	3386.7	3308.7	3297.6	3327.1	3309.6	3316.8	3364.9	3323.0	3352.4	3307.1
10°	3313.3	3358.2	3280.1	3273.0	3300.5	3283.0	3290.3	3340.5	3300.5	3328.0	3282.6
12.5°	3288.7	3323.7	3245.3	3242.3	3265.8	3254.3	3257.6	3299.8	3267.8	3295.3	3252.0
15°	3239.2	3271.7	3193.2	3181.0	3206.0	3196.0	3200.9	3238.6	3213.6	3231.1	3193.2
17.5°	3177.9	3203.9	3125.8	3089.0	3090.0	3102.5	3125.8	3171.2	3148.8	3171.7	3118.1
20°	3126.8	3156.8	3070.6	2998.9	2993.9	3006.4	3070.6	3116.3	3103.8	3128.8	3052.7
22.5°	3067.5	3087.5	3009.3	2888.3	2871.3	2883.8	3001.1	3055.2	3050.7	3067.6	2973.0
25°	2976.1	2996.0	2853.4	2679.3	2437.1	2664.4	2858.6	2955.6	2955.6	2970.6	2845.8
27.5°	2883.1	2883.6	2625.6	1720.7	1517.9	1658.8	2622.0	2832.5	2856.5	2849.0	2603.6
30°	2817.7	2800.2	2327.2	1391.0	1336.0	1371.0	2329.8	2747.1	2787.0	2759.6	2268.5
32.5°	2742.1	2692.6	1718.2	1278.8	1233.9	1264.8	1661.5	2645.6	2715.5	2656.1	1784.1
35°	2618.4	2488.5	1310.5	1130.6	1085.7	1125.7	1300.3	2445.3	2585.2	2425.4	1353.9
37.5°	2485.1	1978.0	1153.6	900.6	803.7	881.1	1148.0	1956.8	2430.9	1911.4	1152.6
40°	2380.9	1554.1	1037.2	658.8	533.9	621.3	1029.5	1482.7	2314.4	1595.1	1011.6
42.5°	2241.9	1365.2	832.8	418.4	327.5	382.9	798.6	1333.6	2171.4	1382.1	805.2
45°	1997.7	1173.4	493.0	229.5	212.0	222.0	454.7	1151.8	1926.1	1126.8	503.2
47.5°	1582.3	894.9	316.8	195.1	214.1	195.1	307.1	866.5	1494.4	865.0	316.3
50°	1198.1	698.5	245.2	197.5	232.5	197.5	237.6	674.7	1136.8	737.1	242.7
52.5°	887.5	583.7	200.3	216.5	279.5	220.5	194.7	568.2	842.5	594.7	189.5
55°	597.8	457.9	160.9	285.8	383.2	293.3	160.9	444.7	567.1	439.7	155.8
57.5°	379.1	340.6	163.0	367.4	437.3	374.4	165.5	328.3	363.8	329.8	143.1
60°	281.0	268.5	181.4	390.1	470.0	395.1	183.9	258.4	275.9	255.9	153.3
62.5°	232.0	211.5	218.2	422.5	488.4	411.5	222.8	201.7	241.2	193.2	169.6
65°	209.5	137.0	258.0	427.9	482.8	427.9	260.6	129.8	219.7	139.8	229.9
67.5°	189.0	101.6	249.3	424.9	485.9	425.9	243.2	96.9	181.4	94.5	235.0
70°	158.4	90.9	235.0	432.5	467.5	417.5	235.0	88.3	150.7	85.8	275.9
72.5°	131.8	86.4	218.7	399.4	414.4	384.4	220.7	85.9	132.3	77.4	259.5
75°	112.4	84.9	209.5	319.0	304.0	304.0	204.4	82.5	115.0	77.5	201.8
77.5°	84.3	75.3	173.7	208.2	196.7	196.7	170.6	72.7	80.2	68.2	164.0
80°	63.9	68.9	143.1	153.1	145.6	145.6	137.9	66.4	63.9	63.9	135.4
82.5°	49.6	58.6	110.4	112.3	106.8	104.8	107.3	58.1	49.6	53.6	104.7
85°	28.1	40.6	58.8	48.4	40.9	38.4	56.2	38.0	25.5	38.0	56.2
87.5°	10.2	18.4	8.8	8.8	8.8	8.8	8.8	18.4	10.2	16.4	10.8
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°	5.8	23.2	74.2	24.7	17.3	24.7	74.2	23.2	5.8	23.2	74.2
95°	17.8	53.5	240.2	89.1	57.4	89.1	240.2	53.5	17.8	53.5	240.2
97.5°	33.0	69.4	406.9	254.3	156.0	254.3	406.9	69.4	33.0	69.4	406.9
100°	43.9	78.6	463.7	422.8	274.7	422.8	463.7	78.6	43.9	78.6	463.7
102.5°	55.6	88.7	453.7	620.9	475.2	620.9	453.7	88.7	55.6	88.7	453.7
105°	73.1	102.7	413.6	787.8	755.2	787.8	413.6	102.7	73.1	102.7	413.6
107.5°	90.7	118.0	375.4	805.2	849.4	805.2	375.4	118.0	90.7	118.0	375.4
110°	102.4	128.9	356.2	785.2	866.9	785.2	356.2	128.9	102.4	128.9	356.2



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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°	114.1	139.0	345.3	750.6	854.4	750.6	345.3	139.0	114.1	139.0	345.3
115°	130.6	155.1	334.2	694.2	816.8	694.2	334.2	155.1	130.6	155.1	334.2
117.5°	146.6	169.9	329.8	639.9	763.5	639.9	329.8	169.9	146.6	169.9	329.8
120°	156.7	179.1	329.0	606.4	725.9	606.4	329.0	179.1	156.7	179.1	329.0
122.5°	166.7	188.3	329.0	579.5	690.8	579.5	329.0	188.3	166.7	188.3	329.0
125°	180.7	202.1	329.0	544.3	641.3	544.3	329.0	202.1	180.7	202.1	329.0
127.5°	193.0	213.6	329.0	517.0	599.7	517.0	329.0	213.6	193.0	213.6	329.0
130°	200.5	222.0	329.0	501.0	575.5	501.0	329.0	222.0	200.5	222.0	329.0
132.5°	208.1	229.5	328.2	488.3	555.5	488.3	328.2	229.5	208.1	229.5	328.2
135°	218.3	239.7	326.9	468.2	527.5	468.2	326.9	239.7	218.3	239.7	326.9
137.5°	228.3	250.8	326.7	449.1	502.0	449.1	326.7	250.8	228.3	250.8	326.7
140°	235.0	257.5	325.9	435.6	483.6	435.6	325.9	257.5	235.0	257.5	325.9
142.5°	243.4	265.0	326.7	422.1	466.9	422.1	326.7	265.0	243.4	265.0	326.7
145°	254.9	274.3	326.9	404.0	439.7	404.0	326.9	274.3	254.9	274.3	326.9
147.5°	266.3	282.9	327.1	388.0	417.2	388.0	327.1	282.9	266.3	282.9	327.1
150°	274.7	288.0	328.0	378.6	402.1	378.6	328.0	288.0	274.7	288.0	328.0
152.5°	281.4	293.0	328.0	371.0	390.4	371.0	328.0	293.0	281.4	293.0	328.0
155°	290.4	300.6	328.0	360.7	375.0	360.7	328.0	300.6	290.4	300.6	328.0
157.5°	300.0	306.9	329.0	354.3	364.1	354.3	329.0	306.9	300.0	306.9	329.0
160°	305.0	311.1	329.0	350.1	358.3	350.1	329.0	311.1	305.0	311.1	329.0
162.5°	310.0	314.5	329.0	346.7	352.4	346.7	329.0	314.5	310.0	314.5	329.0
165°	316.5	319.5	329.0	341.6	344.7	341.6	329.0	319.5	316.5	319.5	329.0
167.5°	322.5	323.4	330.1	338.1	340.7	338.1	330.1	323.4	322.5	323.4	330.1
170°	325.9	325.9	330.1	336.3	337.4	336.3	330.1	325.9	325.9	325.9	330.1
172.5°	327.5	328.4	330.1	334.7	334.9	334.7	330.1	328.4	327.5	328.4	330.1
175°	331.1	330.1	331.1	333.2	332.1	333.2	331.1	330.1	331.1	330.1	331.1
177.5°	332.1	331.3	331.3	332.9	331.3	332.9	331.3	331.3	332.1	331.3	331.3
180°	332.1	332.1	332.1	332.1	332.1	332.1	332.1	332.1	332.1	332.1	332.1



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3387.4	3387.4	3387.4	3387.4	3387.4	3387.4
2.5°	3361.1	3375.1	3375.1	3366.9	3406.9	3369.0
5°	3326.8	3359.3	3344.3	3343.9	3394.2	3356.7
7.5°	3302.7	3333.2	3319.2	3316.3	3365.7	3335.7
10°	3278.0	3300.5	3290.5	3297.9	3343.2	3313.3
12.5°	3243.4	3269.8	3259.8	3271.4	3312.7	3288.7
15°	3183.5	3206.0	3211.0	3216.2	3264.2	3239.2
17.5°	3084.6	3095.6	3120.6	3155.9	3205.9	3177.9
20°	3007.1	3022.0	3037.0	3098.7	3156.8	3126.8
22.5°	2918.7	2913.7	2948.7	3021.0	3093.5	3067.5
25°	2680.5	2488.1	2700.5	2886.7	2983.6	2976.1
27.5°	1866.4	1619.6	1837.9	2664.4	2868.1	2883.1
30°	1468.8	1353.9	1466.3	2378.3	2782.7	2817.7
32.5°	1304.1	1225.2	1293.6	1810.2	2675.1	2742.1
35°	1125.3	1070.4	1125.3	1353.9	2463.6	2618.4
37.5°	900.7	788.3	898.7	1170.0	1991.5	2485.1
40°	671.2	528.8	651.2	1047.4	1591.5	2380.9
42.5°	447.2	340.8	423.2	824.6	1376.6	2241.9
45°	242.0	212.0	232.0	498.1	1123.4	1997.7
47.5°	189.8	200.8	189.8	314.2	859.4	1582.3
50°	182.2	217.1	182.2	242.7	711.0	1198.1
52.5°	198.6	235.5	196.6	191.6	580.2	887.5
55°	225.0	347.4	227.5	155.8	425.4	597.8
57.5°	320.4	390.8	323.9	147.7	327.6	379.1
60°	329.1	421.5	326.6	155.8	253.5	281.0
62.5°	389.3	521.6	388.8	178.3	188.5	232.0
65°	499.3	549.2	504.3	227.4	134.5	209.5
67.5°	473.9	509.4	468.9	243.7	92.6	189.0
70°	465.6	493.0	460.6	278.4	85.9	158.4
72.5°	434.4	437.9	425.4	258.0	77.4	131.8
75°	336.7	314.2	324.2	222.2	77.4	112.4
77.5°	209.3	200.3	201.8	169.6	68.3	84.3
80°	158.3	153.3	150.8	143.1	63.9	63.9
82.5°	117.4	112.4	109.9	110.4	53.6	49.6
85°	53.5	48.5	46.0	63.9	38.1	28.1
87.5°	10.8	10.8	8.8	10.8	14.4	10.2
90°	3.1	3.1	3.1	3.1	1.0	0.0
92.5°	24.7	17.3	24.7	74.2	23.2	5.8
95°	89.1	57.4	89.1	240.2	53.5	17.8
97.5°	254.3	156.0	254.3	406.9	69.4	33.0
100°	422.8	274.7	422.8	463.7	78.6	43.9
102.5°	620.9	475.2	620.9	453.7	88.7	55.6
105°	787.8	755.2	787.8	413.6	102.7	73.1
107.5°	805.2	849.4	805.2	375.4	118.0	90.7
110°	785.2	866.9	785.2	356.2	128.9	102.4





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	750.6	854.4	750.6	345.3	139.0	114.1
115°	694.2	816.8	694.2	334.2	155.1	130.6
117.5°	639.9	763.5	639.9	329.8	169.9	146.6
120°	606.4	725.9	606.4	329.0	179.1	156.7
122.5°	579.5	690.8	579.5	329.0	188.3	166.7
125°	544.3	641.3	544.3	329.0	202.1	180.7
127.5°	517.0	599.7	517.0	329.0	213.6	193.0
130°	501.0	575.5	501.0	329.0	222.0	200.5
132.5°	488.3	555.5	488.3	328.2	229.5	208.1
135°	468.2	527.5	468.2	326.9	239.7	218.3
137.5°	449.1	502.0	449.1	326.7	250.8	228.3
140°	435.6	483.6	435.6	325.9	257.5	235.0
142.5°	422.1	466.9	422.1	326.7	265.0	243.4
145°	404.0	439.7	404.0	326.9	274.3	254.9
147.5°	388.0	417.2	388.0	327.1	282.9	266.3
150°	378.6	402.1	378.6	328.0	288.0	274.7
152.5°	371.0	390.4	371.0	328.0	293.0	281.4
155°	360.7	375.0	360.7	328.0	300.6	290.4
157.5°	354.3	364.1	354.3	329.0	306.9	300.0
160°	350.1	358.3	350.1	329.0	311.1	305.0
162.5°	346.7	352.4	346.7	329.0	314.5	310.0
165°	341.6	344.7	341.6	329.0	319.5	316.5
167.5°	338.1	340.7	338.1	330.1	323.4	322.5
170°	336.3	337.4	336.3	330.1	325.9	325.9
172.5°	334.7	334.9	334.7	330.1	328.4	327.5
175°	333.2	332.1	333.2	331.1	330.1	331.1
177.5°	332.9	331.3	332.9	331.3	331.3	332.1
180°	332.1	332.1	332.1	332.1	332.1	332.1



TEST NUMBER: P853763

CATALOG NUMBER: SQ2-FA-050U-125D-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	15.61	16.53	16.40	17.32	18.27	14.47	15.39	15.25	16.17	17.12
	3H	16.32	17.14	17.11	17.93	18.92	20.63	21.45	21.42	22.24	23.23
	4H	16.73	17.50	17.54	18.31	19.30	21.91	22.68	22.72	23.48	24.48
	6H	17.09	17.80	17.91	18.61	19.62	22.52	23.23	23.34	24.04	25.05
	8H	17.21	17.88	18.04	18.71	19.72	22.64	23.32	23.47	24.15	25.15
	12H	17.28	17.93	18.12	18.75	19.78	22.68	23.33	23.52	24.15	25.18
4H	2H	16.02	16.79	16.83	17.59	18.59	15.01	15.78	15.83	16.59	17.58
	3H	17.02	17.66	17.84	18.50	19.51	21.34	21.98	22.17	22.82	23.83
	4H	17.58	18.17	18.42	19.00	20.04	22.79	23.38	23.63	24.21	25.25
	6H	18.06	18.57	18.92	19.43	20.47	23.53	24.04	24.39	24.90	25.94
	8H	18.23	18.70	19.09	19.56	20.61	23.70	24.17	24.56	25.03	26.08
	12H	18.35	18.77	19.23	19.65	20.71	23.77	24.19	24.64	25.06	26.12
8H	4H	18.69	19.16	19.54	20.01	21.07	22.92	23.39	23.78	24.25	25.30
	6H	19.30	19.68	20.18	20.58	21.64	23.80	24.19	24.69	25.09	26.14
	8H	19.53	19.87	20.43	20.77	21.84	24.05	24.39	24.95	25.29	26.36
	12H	19.71	20.01	20.60	20.89	22.02	24.18	24.48	25.07	25.36	26.49
12H	4H	18.83	19.26	19.71	20.13	21.19	22.89	23.31	23.76	24.18	25.24
	6H	19.57	19.91	20.47	20.81	21.88	23.81	24.15	24.71	25.05	26.12
	8H	19.88	20.17	20.77	21.06	22.19	24.10	24.40	24.99	25.28	26.41