

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: P855044

Luminaire Tested: SQ2-FA-075U-125D-830-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P855044  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-11, G2-2308-131-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-FA-075U-125D-830-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1250 LUMENS PER FOOT  
UPLIGHT 750 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

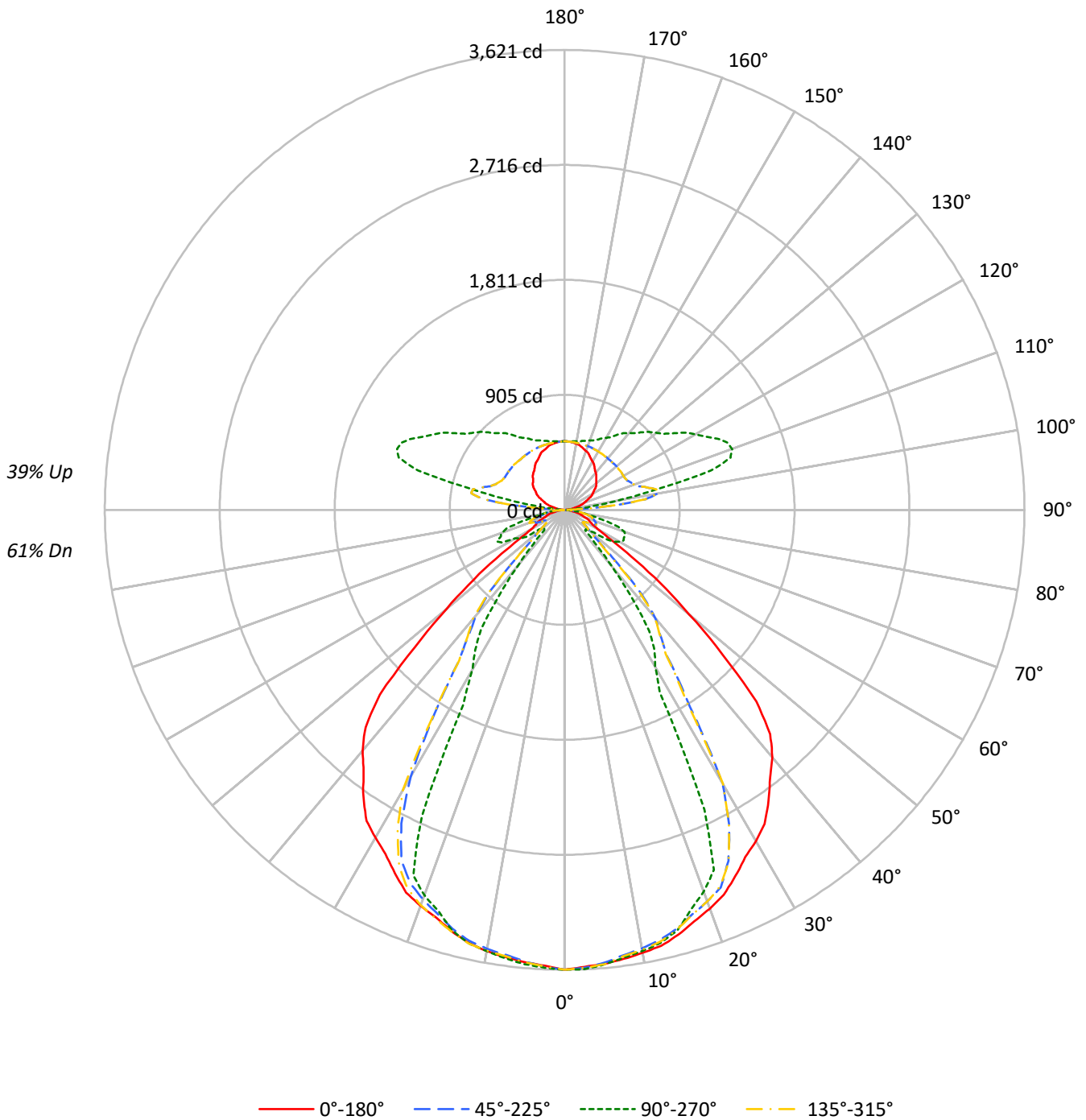
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8626.8 lumens  
Efficiency: N/A  
Efficacy: 119.0 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): 72.5  
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	0	
RCR																						
0	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	61	61	61	61	
1	102	98	94	91	95	92	89	86	81	78	76	70	69	67	61	60	59	54	54	54	54	
2	94	87	82	77	88	82	77	73	72	69	66	64	61	59	55	54	52	48	48	48	48	
3	87	78	72	66	81	74	68	63	66	61	57	58	55	52	51	48	46	43	43	43	43	
4	80	71	64	58	75	67	61	56	60	55	51	53	49	46	47	44	42	39	39	39	39	
5	75	64	57	51	70	61	54	49	55	49	45	49	45	41	43	40	38	35	35	35	35	
6	70	59	51	46	65	56	49	44	50	45	41	45	41	38	40	37	34	32	32	32	32	
7	65	54	46	41	61	51	45	40	46	41	37	42	37	34	37	34	31	29	29	29	29	
8	61	50	42	37	57	47	41	36	43	38	34	39	34	31	35	32	29	27	27	27	27	
9	57	46	39	34	54	44	37	33	40	35	31	36	32	29	33	29	27	25	25	25	25	
10	54	43	36	31	51	41	35	30	37	32	28	34	30	27	31	27	25	23	23	23	23	

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

	0°	90°	180°	270°
0°	58461	58461	58461	58461
5°	58153	58240	57931	58196
10°	58063	57838	57838	57838
15°	57875	57282	57417	57282
20°	57426	54986	57003	55501
25°	56671	46408	56281	47381
30°	56151	26625	55539	26981
35°	55166	22874	54466	22551
40°	53639	12026	52140	11913
45°	48757	5174	47012	5174
50°	32169	6242	30521	5830
55°	17985	11530	17061	10452
60°	9700	16227	9523	14551
65°	8554	19713	8970	22426
70°	7992	23589	7605	24878
75°	7498	20268	7667	20954
80°	6351	14477	6351	15230
85°	5576	8077	5076	9615

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 48757 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	340.7	3.9
10°-20°	966.7	11.2
20°-30°	1318.0	15.3
30°-40°	1107.6	12.8
40°-50°	629.1	7.3
50°-60°	333.8	3.9
60°-70°	307.3	3.6
70°-80°	225.6	2.6
80°-90°	59.5	0.7
90°-100°	203.9	2.4
100°-110°	676.0	7.8
110°-120°	670.9	7.8
120°-130°	546.5	6.3
130°-140°	444.1	5.1
140°-150°	344.9	4.0
150°-160°	248.5	2.9
160°-170°	152.2	1.8
170°-180°	51.4	0.6
0°-30°	2625.4	30.4
0°-40°	3733.0	43.3
0°-60°	4695.8	54.4
0°-90°	5288.2	61.3
90°-120°	1550.9	18.0
90°-150°	2886.4	33.5
90°-180°	3339.0	38.7
0°-180°	8626.8	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	3621	3621	3621	3621	3621	
5°	3588	3593	3574	3591	3588	341
15°	3462	3427	3435	3427	3462	976
25°	3181	2605	3159	2660	3181	1467
35°	2799	1160	2763	1144	2799	1747
45°	2135	227	2059	227	2135	1561
55°	639	410	606	371	639	615
65°	224	516	235	587	224	225
75°	120	325	123	336	120	124
85°	30	44	27	52	30	33
90°	0	4	0	4	0	3
95°	29	88	29	88	29	33
105°	118	1193	118	1193	118	125
115°	211	1326	211	1326	211	209
125°	295	1050	295	1050	295	262
135°	353	863	353	863	353	273
145°	410	720	410	720	410	257
155°	468	610	468	610	468	216
165°	514	562	514	562	514	145
175°	537	540	537	540	537	51
180°	539	539	539	539	539	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3620.8	3620.8	3620.8	3620.8	3620.8	3620.8	3620.8	3620.8	3620.8	3620.8	3620.8
2.5°	3601.1	3654.5	3607.7	3601.6	3620.8	3616.5	3609.8	3635.0	3592.3	3635.0	3601.1
5°	3588.0	3649.4	3579.7	3561.4	3593.4	3572.0	3590.7	3627.7	3574.3	3622.4	3568.9
7.5°	3565.6	3620.0	3536.7	3524.8	3556.3	3537.6	3545.4	3596.8	3551.9	3583.5	3535.0
10°	3541.5	3589.6	3506.0	3498.5	3527.8	3509.2	3517.0	3570.6	3527.8	3557.2	3508.7
12.5°	3515.3	3552.7	3468.9	3465.6	3490.7	3478.4	3482.0	3527.2	3492.9	3522.3	3476.0
15°	3462.4	3497.1	3413.2	3400.2	3426.9	3416.1	3421.4	3461.8	3435.0	3453.8	3413.2
17.5°	3396.8	3424.6	3341.2	3301.8	3302.8	3316.3	3341.2	3389.7	3365.7	3390.2	3332.9
20°	3342.2	3374.3	3282.1	3205.6	3200.2	3213.5	3282.1	3331.0	3317.6	3344.3	3263.0
22.5°	3278.9	3300.2	3216.6	3087.3	3069.1	3082.5	3207.9	3265.6	3260.9	3279.0	3177.8
25°	3181.1	3202.4	3050.0	2863.9	2605.0	2847.9	3055.4	3159.2	3159.2	3175.3	3041.9
27.5°	3081.7	3082.2	2806.5	1839.3	1622.5	1773.1	2802.6	3027.6	3053.3	3045.3	2783.0
30°	3011.8	2993.2	2487.5	1486.8	1428.1	1465.4	2490.2	2936.3	2979.0	2949.6	2424.8
32.5°	2931.0	2878.2	1836.6	1366.9	1318.9	1352.0	1776.0	2827.9	2902.6	2839.0	1907.1
35°	2798.8	2660.0	1400.8	1208.5	1160.5	1203.2	1389.9	2613.8	2763.3	2592.5	1447.2
37.5°	2656.3	2114.3	1233.1	962.6	859.1	941.8	1227.1	2091.7	2598.4	2043.1	1232.1
40°	2544.9	1661.1	1108.6	704.2	570.6	664.1	1100.5	1584.8	2473.8	1705.0	1081.3
42.5°	2396.4	1459.2	890.2	447.3	350.0	409.3	853.5	1425.5	2321.0	1477.3	860.6
45°	2135.3	1254.2	527.0	245.3	226.6	237.3	486.1	1231.2	2058.9	1204.5	538.0
47.5°	1691.3	956.5	338.6	208.5	228.8	208.5	328.2	926.2	1597.4	924.5	338.1
50°	1280.7	746.7	262.1	211.1	248.5	211.1	253.9	721.1	1215.1	787.9	259.4
52.5°	948.6	623.9	214.0	231.4	298.7	235.7	208.0	607.4	900.6	635.6	202.6
55°	638.9	489.5	172.0	305.5	409.6	313.4	172.0	475.3	606.1	470.0	166.5
57.5°	405.2	364.1	174.2	392.7	467.5	400.2	176.9	351.0	388.8	352.5	152.9
60°	300.4	287.0	193.9	417.0	502.5	422.3	196.6	276.2	294.9	273.5	163.8
62.5°	248.0	226.0	233.1	451.6	522.1	439.8	238.1	215.6	257.8	206.5	181.4
65°	223.9	146.5	275.8	457.3	516.0	457.3	278.5	138.7	234.8	149.4	245.8
67.5°	202.0	108.7	266.5	454.2	519.3	455.3	259.9	103.7	193.9	101.0	251.2
70°	169.3	97.2	251.2	462.3	499.7	446.3	251.2	94.4	161.1	91.7	294.9
72.5°	140.9	92.3	233.7	426.9	442.9	410.9	236.0	91.8	141.4	82.7	277.5
75°	120.2	90.8	223.9	341.0	324.9	324.9	218.4	88.2	122.9	82.9	215.7
77.5°	90.1	80.5	185.7	222.5	210.3	210.3	182.4	77.7	85.7	72.9	175.2
80°	68.3	73.6	152.9	163.6	155.7	155.7	147.4	70.9	68.3	68.3	144.7
82.5°	53.0	62.6	117.9	120.0	114.1	112.0	114.6	62.1	53.0	57.2	111.9
85°	30.1	43.4	62.8	51.7	43.6	41.0	60.0	40.7	27.4	40.7	60.0
87.5°	11.0	19.7	9.4	9.6	9.6	9.6	9.4	19.7	11.0	17.5	11.6
90°	0.0	1.1	3.4	4.4	4.4	4.4	3.4	1.1	0.0	1.1	3.4
92.5°	8.9	34.5	101.6	32.9	27.7	32.9	101.6	34.5	8.9	34.5	101.6
95°	29.1	85.8	369.5	131.8	88.2	131.8	369.5	85.8	29.1	85.8	369.5
97.5°	53.4	112.7	645.0	376.2	237.8	376.2	645.0	112.7	53.4	112.7	645.0
100°	70.3	127.1	746.9	641.5	425.3	641.5	746.9	127.1	70.3	127.1	746.9
102.5°	89.1	144.2	740.6	980.4	740.6	980.4	740.6	144.2	89.1	144.2	740.6
105°	118.4	168.6	676.6	1276.4	1193.4	1276.4	676.6	168.6	118.4	168.6	676.6
107.5°	148.2	193.0	615.2	1306.5	1369.5	1306.5	615.2	193.0	148.2	193.0	615.2
110°	165.2	210.0	583.9	1276.7	1404.4	1276.7	583.9	210.0	165.2	210.0	583.9



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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°	183.1	226.9	565.1	1223.9	1386.6	1223.9	565.1	226.9	183.1	226.9	565.1
115°	211.0	252.5	544.9	1134.1	1326.2	1134.1	544.9	252.5	211.0	252.5	544.9
117.5°	238.7	275.5	537.4	1048.4	1249.9	1048.4	537.4	275.5	238.7	275.5	537.4
120°	255.6	291.7	534.8	994.7	1190.1	994.7	534.8	291.7	255.6	291.7	534.8
122.5°	270.8	306.0	534.8	950.5	1131.1	950.5	534.8	306.0	270.8	306.0	534.8
125°	294.8	327.4	534.8	891.2	1050.5	891.2	534.8	327.4	294.8	327.4	534.8
127.5°	314.4	346.4	533.4	846.2	982.4	846.2	533.4	346.4	314.4	346.4	533.4
130°	326.0	359.9	532.5	819.9	942.3	819.9	532.5	359.9	326.0	359.9	532.5
132.5°	336.7	371.4	531.6	798.2	908.2	798.2	531.6	371.4	336.7	371.4	531.6
135°	352.8	388.8	530.3	764.8	863.0	764.8	530.3	388.8	352.8	388.8	530.3
137.5°	370.2	404.9	528.9	732.3	819.0	732.3	528.9	404.9	370.2	404.9	528.9
140°	381.8	415.6	528.0	710.7	790.4	710.7	528.0	415.6	381.8	415.6	528.0
142.5°	392.6	425.5	528.9	689.1	760.0	689.1	528.9	425.5	392.6	425.5	528.9
145°	409.7	440.3	529.1	657.8	720.1	657.8	529.1	440.3	409.7	440.3	529.1
147.5°	428.3	453.8	529.4	631.4	677.7	631.4	529.4	453.8	428.3	453.8	529.4
150°	439.8	462.8	530.3	616.0	655.3	616.0	530.3	462.8	439.8	462.8	530.3
152.5°	450.6	472.6	531.2	603.3	634.7	603.3	531.2	472.6	450.6	472.6	531.2
155°	467.7	484.1	532.5	587.7	609.5	587.7	532.5	484.1	467.7	484.1	532.5
157.5°	484.5	497.1	533.9	576.6	592.1	576.6	533.9	497.1	484.5	497.1	533.9
160°	493.4	504.4	534.8	568.5	580.5	568.5	534.8	504.4	493.4	504.4	534.8
162.5°	502.3	510.7	534.8	563.1	572.4	563.1	534.8	510.7	502.3	510.7	534.8
165°	513.5	519.0	534.8	556.1	561.6	556.1	534.8	519.0	513.5	519.0	534.8
167.5°	523.8	526.7	535.9	549.8	552.7	549.8	535.9	526.7	523.8	526.7	535.9
170°	529.1	530.3	535.9	547.0	548.1	547.0	535.9	530.3	529.1	530.3	535.9
172.5°	532.8	533.9	536.7	544.4	544.6	544.4	536.7	533.9	532.8	533.9	536.7
175°	536.9	536.9	538.1	541.5	540.3	541.5	538.1	536.9	536.9	536.9	538.1
177.5°	539.2	539.2	538.3	540.1	538.3	540.1	538.3	539.2	539.2	539.2	538.3
180°	539.2	539.2	539.2	539.2	539.2	539.2	539.2	539.2	539.2	539.2	539.2



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3620.8	3620.8	3620.8	3620.8	3620.8	3620.8
2.5°	3592.6	3607.7	3607.7	3598.8	3641.7	3601.1
5°	3556.0	3590.7	3574.6	3574.3	3628.0	3588.0
7.5°	3530.3	3562.9	3547.8	3544.8	3597.6	3565.6
10°	3503.9	3527.8	3517.2	3525.1	3573.6	3541.5
12.5°	3466.8	3495.2	3484.4	3496.7	3540.9	3515.3
15°	3402.8	3426.9	3432.2	3437.8	3489.1	3462.4
17.5°	3297.2	3308.9	3335.6	3373.4	3426.8	3396.8
20°	3214.2	3230.2	3246.3	3312.2	3374.3	3342.2
22.5°	3119.8	3114.5	3151.9	3229.1	3306.7	3278.9
25°	2865.2	2659.6	2886.5	3085.5	3189.1	3181.1
27.5°	1994.9	1731.1	1964.5	2848.0	3065.7	3081.7
30°	1570.0	1447.2	1567.3	2542.1	2974.4	3011.8
32.5°	1394.0	1309.6	1382.8	1934.9	2859.4	2931.0
35°	1202.9	1144.1	1202.9	1447.2	2633.3	2798.8
37.5°	962.7	842.7	960.7	1250.6	2128.8	2656.3
40°	717.4	565.2	696.0	1119.6	1701.2	2544.9
42.5°	478.0	364.3	452.4	881.4	1471.5	2396.4
45°	258.7	226.6	248.0	532.4	1200.9	2135.3
47.5°	202.8	214.6	202.8	335.9	918.6	1691.3
50°	194.7	232.1	194.7	259.4	760.0	1280.7
52.5°	212.2	251.8	210.1	204.8	620.2	948.6
55°	240.5	371.3	243.2	166.5	454.7	638.9
57.5°	342.5	417.8	346.2	157.8	350.2	405.2
60°	351.7	450.6	349.1	166.5	271.0	300.4
62.5°	416.1	557.6	415.5	190.6	201.5	248.0
65°	533.7	587.0	539.0	243.0	143.8	223.9
67.5°	506.5	544.5	501.2	260.5	99.0	202.0
70°	497.6	527.0	492.3	297.6	91.9	169.3
72.5°	464.2	468.0	454.6	275.8	82.7	140.9
75°	359.9	335.9	346.5	237.5	82.8	120.2
77.5°	223.6	214.0	215.7	181.4	73.0	90.1
80°	169.1	163.8	161.1	152.9	68.3	68.3
82.5°	125.5	120.2	117.5	117.9	57.2	53.0
85°	57.2	51.9	49.2	68.3	40.7	30.1
87.5°	11.9	11.9	9.7	11.6	15.4	11.0
90°	4.4	4.4	4.4	3.4	1.1	0.0
92.5°	32.9	27.7	32.9	101.6	34.5	8.9
95°	131.8	88.2	131.8	369.5	85.8	29.1
97.5°	376.2	237.8	376.2	645.0	112.7	53.4
100°	641.5	425.3	641.5	746.9	127.1	70.3
102.5°	980.4	740.6	980.4	740.6	144.2	89.1
105°	1276.4	1193.4	1276.4	676.6	168.6	118.4
107.5°	1306.5	1369.5	1306.5	615.2	193.0	148.2
110°	1276.7	1404.4	1276.7	583.9	210.0	165.2





TEST NUMBER: P855044

CATALOG NUMBER: SQ2-FA-075U-125D-830-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	1223.9	1386.6	1223.9	565.1	226.9	183.1
115°	1134.1	1326.2	1134.1	544.9	252.5	211.0
117.5°	1048.4	1249.9	1048.4	537.4	275.5	238.7
120°	994.7	1190.1	994.7	534.8	291.7	255.6
122.5°	950.5	1131.1	950.5	534.8	306.0	270.8
125°	891.2	1050.5	891.2	534.8	327.4	294.8
127.5°	846.2	982.4	846.2	533.4	346.4	314.4
130°	819.9	942.3	819.9	532.5	359.9	326.0
132.5°	798.2	908.2	798.2	531.6	371.4	336.7
135°	764.8	863.0	764.8	530.3	388.8	352.8
137.5°	732.3	819.0	732.3	528.9	404.9	370.2
140°	710.7	790.4	710.7	528.0	415.6	381.8
142.5°	689.1	760.0	689.1	528.9	425.5	392.6
145°	657.8	720.1	657.8	529.1	440.3	409.7
147.5°	631.4	677.7	631.4	529.4	453.8	428.3
150°	616.0	655.3	616.0	530.3	462.8	439.8
152.5°	603.3	634.7	603.3	531.2	472.6	450.6
155°	587.7	609.5	587.7	532.5	484.1	467.7
157.5°	576.6	592.1	576.6	533.9	497.1	484.5
160°	568.5	580.5	568.5	534.8	504.4	493.4
162.5°	563.1	572.4	563.1	534.8	510.7	502.3
165°	556.1	561.6	556.1	534.8	519.0	513.5
167.5°	549.8	552.7	549.8	535.9	526.7	523.8
170°	547.0	548.1	547.0	535.9	530.3	529.1
172.5°	544.4	544.6	544.4	536.7	533.9	532.8
175°	541.5	540.3	541.5	538.1	536.9	536.9
177.5°	540.1	538.3	540.1	538.3	539.2	539.2
180°	539.2	539.2	539.2	539.2	539.2	539.2

TEST NUMBER: P855044

CATALOG NUMBER: SQ2-FA-075U-125D-830-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	15.07	15.91	15.95	16.79	17.90	13.93	14.77	14.81	15.65	16.76
	3H	15.78	16.53	16.67	17.42	18.55	20.08	20.83	20.97	21.72	22.86
	4H	16.19	16.89	17.09	17.79	18.94	21.36	22.07	22.26	22.96	24.11
	6H	16.54	17.19	17.46	18.10	19.25	21.97	22.62	22.88	23.52	24.68
	8H	16.66	17.28	17.58	18.20	19.35	22.09	22.71	23.01	23.63	24.78
	12H	16.73	17.32	17.66	18.23	19.41	22.13	22.72	23.06	23.63	24.81
4H	2H	15.47	16.18	16.38	17.07	18.22	14.46	15.17	15.37	16.07	17.21
	3H	16.47	17.06	17.39	17.99	19.14	20.79	21.38	21.71	22.31	23.47
	4H	17.03	17.57	17.96	18.49	19.68	22.24	22.78	23.17	23.70	24.89
	6H	17.51	17.97	18.45	18.92	20.10	22.98	23.44	23.92	24.39	25.57
	8H	17.68	18.11	18.62	19.05	20.25	23.14	23.58	24.09	24.52	25.72
	12H	17.79	18.18	18.75	19.14	20.34	23.21	23.59	24.17	24.55	25.76
8H	4H	18.13	18.56	19.07	19.50	20.70	22.36	22.80	23.31	23.74	24.94
	6H	18.74	19.09	19.71	20.08	21.27	23.24	23.60	24.21	24.58	25.78
	8H	18.97	19.29	19.95	20.26	21.48	23.49	23.81	24.47	24.78	26.00
	12H	19.15	19.42	20.12	20.39	21.65	23.61	23.89	24.59	24.85	26.12
12H	4H	18.28	18.66	19.23	19.62	20.82	22.33	22.71	23.29	23.67	24.87
	6H	19.01	19.33	19.99	20.30	21.52	23.25	23.57	24.23	24.54	25.75
	8H	19.31	19.59	20.29	20.55	21.82	23.53	23.81	24.51	24.77	26.04