

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: P855047

Luminaire Tested: SQ2-FA-050U-125D-830-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855047
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-830-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

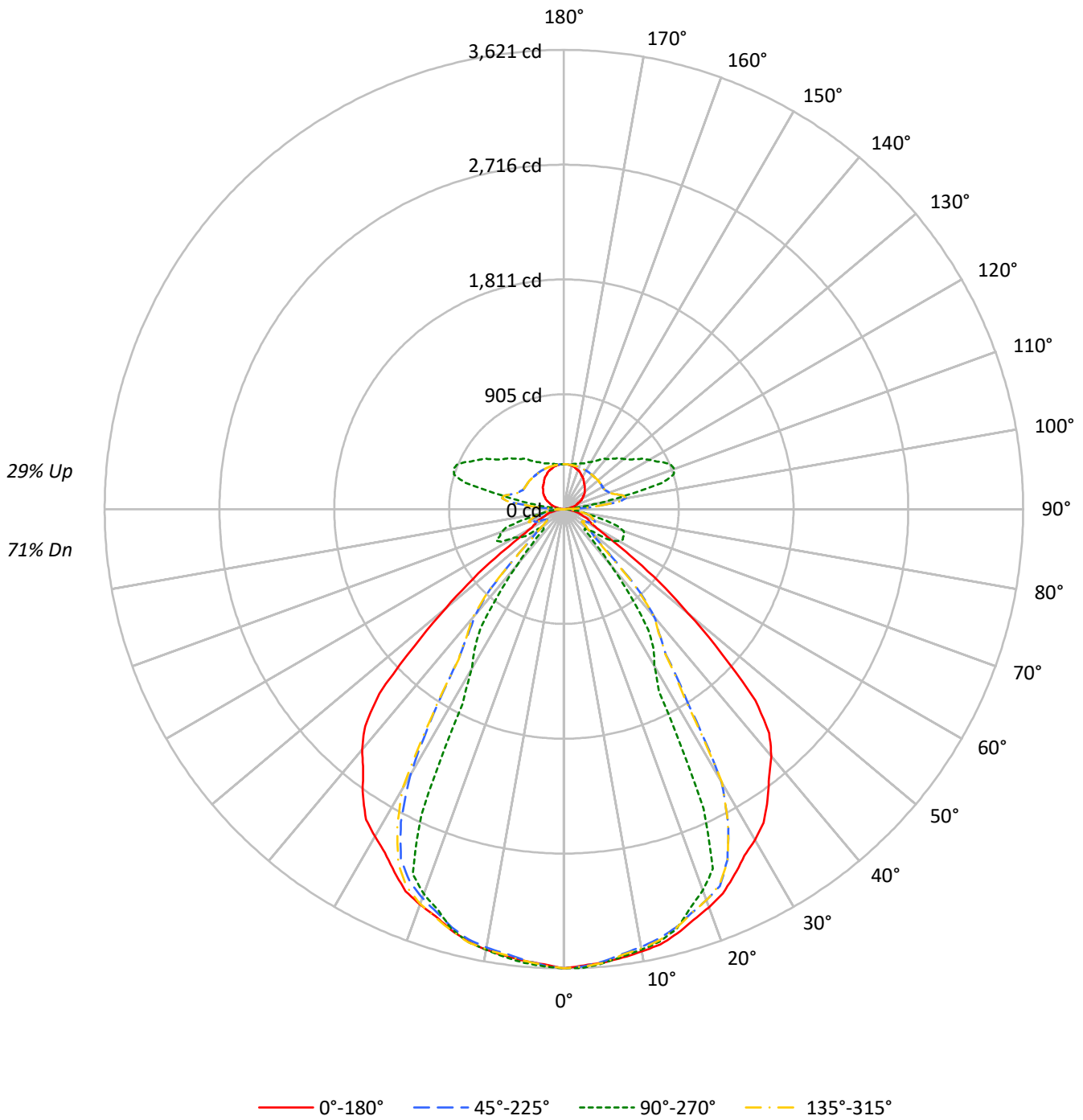
Lumens per Lamp: N/A
Luminaire Lumens: 7492.9 lumens
Efficiency: N/A
Efficacy: 117.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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°	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	4.5
10°-20°	966.7	12.9
20°-30°	1318.0	17.6
30°-40°	1107.6	14.8
40°-50°	629.1	8.4
50°-60°	333.8	4.5
60°-70°	307.3	4.1
70°-80°	225.6	3.0
80°-90°	59.4	0.8
90°-100°	141.4	1.9
100°-110°	448.5	6.0
110°-120°	439.8	5.9
120°-130°	357.9	4.8
130°-140°	291.8	3.9
140°-150°	227.5	3.0
150°-160°	163.9	2.2
160°-170°	100.1	1.3
170°-180°	33.8	0.5
0°-30°	2625.4	35.0
0°-40°	3733.0	49.8
0°-60°	4695.8	62.7
0°-90°	5288.2	70.6
90°-120°	1029.7	13.7
90°-150°	1906.8	25.4
90°-180°	2205.0	29.4
0°-180°	7492.9	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	3	0	3	0	2
95°	19	61	19	61	19	22
105°	78	807	78	807	78	82
115°	140	873	140	873	140	138
125°	193	686	193	686	193	172
135°	233	564	233	564	233	180
145°	272	470	272	470	272	171
155°	310	401	310	401	310	143
165°	338	368	338	368	338	95
175°	354	355	354	355	354	34
180°	355	355	355	355	355	



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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	9.4	9.4	9.4	9.4	19.7	11.0	17.5	11.6
90°	0.0	1.1	3.4	3.4	3.4	3.4	3.4	1.1	0.0	1.1	3.4
92.5°	6.2	24.8	79.3	26.3	18.5	26.3	79.3	24.8	6.2	24.8	79.3
95°	19.0	57.2	256.8	95.2	61.4	95.2	256.8	57.2	19.0	57.2	256.8
97.5°	35.3	74.2	435.0	271.8	166.8	271.8	435.0	74.2	35.3	74.2	435.0
100°	46.9	84.0	495.7	451.9	293.6	451.9	495.7	84.0	46.9	84.0	495.7
102.5°	59.4	94.7	484.9	663.7	508.0	663.7	484.9	94.7	59.4	94.7	484.9
105°	78.1	109.8	442.1	842.1	807.2	842.1	442.1	109.8	78.1	109.8	442.1
107.5°	96.9	126.2	401.3	860.8	907.9	860.8	401.3	126.2	96.9	126.2	401.3
110°	109.4	137.8	380.7	839.3	926.7	839.3	380.7	137.8	109.4	137.8	380.7



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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°	121.9	148.6	369.0	802.3	913.2	802.3	369.0	148.6	121.9	148.6	369.0
115°	139.5	165.8	357.3	742.0	873.1	742.0	357.3	165.8	139.5	165.8	357.3
117.5°	156.7	181.6	352.5	684.0	816.1	684.0	352.5	181.6	156.7	181.6	352.5
120°	167.4	191.5	351.6	648.2	776.0	648.2	351.6	191.5	167.4	191.5	351.6
122.5°	178.2	201.4	351.6	619.4	738.4	619.4	351.6	201.4	178.2	201.4	351.6
125°	193.1	216.1	351.6	581.8	685.5	581.8	351.6	216.1	193.1	216.1	351.6
127.5°	206.3	228.4	351.6	552.7	641.1	552.7	351.6	228.4	206.3	228.4	351.6
130°	214.4	237.3	351.6	535.5	615.2	535.5	351.6	237.3	214.4	237.3	351.6
132.5°	222.4	245.3	350.8	521.9	593.7	521.9	350.8	245.3	222.4	245.3	350.8
135°	233.4	256.2	349.5	500.5	563.9	500.5	349.5	256.2	233.4	256.2	349.5
137.5°	244.1	268.1	349.3	480.0	536.6	480.0	349.3	268.1	244.1	268.1	349.3
140°	251.2	275.2	348.4	465.6	516.9	465.6	348.4	275.2	251.2	275.2	348.4
142.5°	260.2	283.2	349.3	451.2	499.1	451.2	349.3	283.2	260.2	283.2	349.3
145°	272.4	293.2	349.5	431.8	470.0	431.8	349.5	293.2	272.4	293.2	349.5
147.5°	284.7	302.3	349.7	414.7	445.9	414.7	349.7	302.3	284.7	302.3	349.7
150°	293.6	307.8	350.6	404.8	429.9	404.8	350.6	307.8	293.6	307.8	350.6
152.5°	300.8	313.2	350.6	396.6	417.3	396.6	350.6	313.2	300.8	313.2	350.6
155°	310.4	321.3	350.6	385.5	400.8	385.5	350.6	321.3	310.4	321.3	350.6
157.5°	320.7	328.1	351.6	378.8	389.2	378.8	351.6	328.1	320.7	328.1	351.6
160°	326.0	332.5	351.6	374.2	382.9	374.2	351.6	332.5	326.0	332.5	351.6
162.5°	331.4	336.1	351.6	370.6	376.7	370.6	351.6	336.1	331.4	336.1	351.6
165°	338.3	341.6	351.6	365.2	368.5	365.2	351.6	341.6	338.3	341.6	351.6
167.5°	344.7	345.6	352.8	361.4	364.2	361.4	352.8	345.6	344.7	345.6	352.8
170°	348.4	348.4	352.8	359.5	360.6	359.5	352.8	348.4	348.4	348.4	352.8
172.5°	350.2	351.0	352.8	357.7	358.0	357.7	352.8	351.0	350.2	351.0	352.8
175°	353.9	352.9	353.9	356.2	355.0	356.2	353.9	352.9	353.9	352.9	353.9
177.5°	355.0	354.1	354.1	355.9	354.1	355.9	354.1	354.1	355.0	354.1	354.1
180°	355.0	355.0	355.0	355.0	355.0	355.0	355.0	355.0	355.0	355.0	355.0



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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°	11.6	11.6	9.5	11.6	15.4	11.0
90°	3.4	3.4	3.4	3.4	1.1	0.0
92.5°	26.3	18.5	26.3	79.3	24.8	6.2
95°	95.2	61.4	95.2	256.8	57.2	19.0
97.5°	271.8	166.8	271.8	435.0	74.2	35.3
100°	451.9	293.6	451.9	495.7	84.0	46.9
102.5°	663.7	508.0	663.7	484.9	94.7	59.4
105°	842.1	807.2	842.1	442.1	109.8	78.1
107.5°	860.8	907.9	860.8	401.3	126.2	96.9
110°	839.3	926.7	839.3	380.7	137.8	109.4



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	802.3	913.2	802.3	369.0	148.6	121.9
115°	742.0	873.1	742.0	357.3	165.8	139.5
117.5°	684.0	816.1	684.0	352.5	181.6	156.7
120°	648.2	776.0	648.2	351.6	191.5	167.4
122.5°	619.4	738.4	619.4	351.6	201.4	178.2
125°	581.8	685.5	581.8	351.6	216.1	193.1
127.5°	552.7	641.1	552.7	351.6	228.4	206.3
130°	535.5	615.2	535.5	351.6	237.3	214.4
132.5°	521.9	593.7	521.9	350.8	245.3	222.4
135°	500.5	563.9	500.5	349.5	256.2	233.4
137.5°	480.0	536.6	480.0	349.3	268.1	244.1
140°	465.6	516.9	465.6	348.4	275.2	251.2
142.5°	451.2	499.1	451.2	349.3	283.2	260.2
145°	431.8	470.0	431.8	349.5	293.2	272.4
147.5°	414.7	445.9	414.7	349.7	302.3	284.7
150°	404.8	429.9	404.8	350.6	307.8	293.6
152.5°	396.6	417.3	396.6	350.6	313.2	300.8
155°	385.5	400.8	385.5	350.6	321.3	310.4
157.5°	378.8	389.2	378.8	351.6	328.1	320.7
160°	374.2	382.9	374.2	351.6	332.5	326.0
162.5°	370.6	376.7	370.6	351.6	336.1	331.4
165°	365.2	368.5	365.2	351.6	341.6	338.3
167.5°	361.4	364.2	361.4	352.8	345.6	344.7
170°	359.5	360.6	359.5	352.8	348.4	348.4
172.5°	357.7	358.0	357.7	352.8	351.0	350.2
175°	356.2	355.0	356.2	353.9	352.9	353.9
177.5°	355.9	354.1	355.9	354.1	354.1	355.0
180°	355.0	355.0	355.0	355.0	355.0	355.0



TEST NUMBER: P855047

CATALOG NUMBER: SQ2-FA-050U-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	15.84	16.76	16.63	17.55	18.50	14.70	15.62	15.48	16.40	17.36
	3H	16.55	17.37	17.35	18.17	19.15	20.86	21.68	21.65	22.47	23.46
	4H	16.96	17.74	17.78	18.54	19.54	22.14	22.91	22.95	23.71	24.71
	6H	17.32	18.03	18.14	18.85	19.85	22.75	23.46	23.57	24.27	25.28
	8H	17.44	18.12	18.27	18.95	19.95	22.87	23.55	23.71	24.38	25.39
	12H	17.52	18.16	18.35	18.98	20.01	22.92	23.56	23.75	24.38	25.41
4H	2H	16.25	17.02	17.06	17.82	18.82	15.24	16.01	16.06	16.82	17.81
	3H	17.25	17.89	18.07	18.73	19.74	21.57	22.21	22.40	23.05	24.06
	4H	17.81	18.40	18.65	19.24	20.27	23.02	23.61	23.86	24.45	25.48
	6H	18.29	18.80	19.15	19.66	20.70	23.76	24.27	24.62	25.13	26.17
	8H	18.47	18.94	19.32	19.79	20.85	23.93	24.40	24.79	25.26	26.31
	12H	18.58	19.01	19.46	19.88	20.94	24.00	24.42	24.87	25.29	26.35
8H	4H	18.92	19.39	19.77	20.24	21.30	23.15	23.62	24.01	24.48	25.53
	6H	19.53	19.91	20.41	20.81	21.87	24.03	24.42	24.92	25.32	26.37
	8H	19.76	20.11	20.66	21.00	22.07	24.28	24.62	25.18	25.52	26.59
	12H	19.94	20.24	20.83	21.12	22.25	24.41	24.71	25.30	25.59	26.72
12H	4H	19.07	19.49	19.94	20.36	21.42	23.12	23.54	23.99	24.41	25.47
	6H	19.80	20.14	20.70	21.04	22.11	24.04	24.38	24.94	25.28	26.35
	8H	20.11	20.41	21.00	21.29	22.42	24.33	24.63	25.22	25.51	26.64