

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: P855258

Luminaire Tested: SQ2-FA-050U-125D-835-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855258
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-835-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

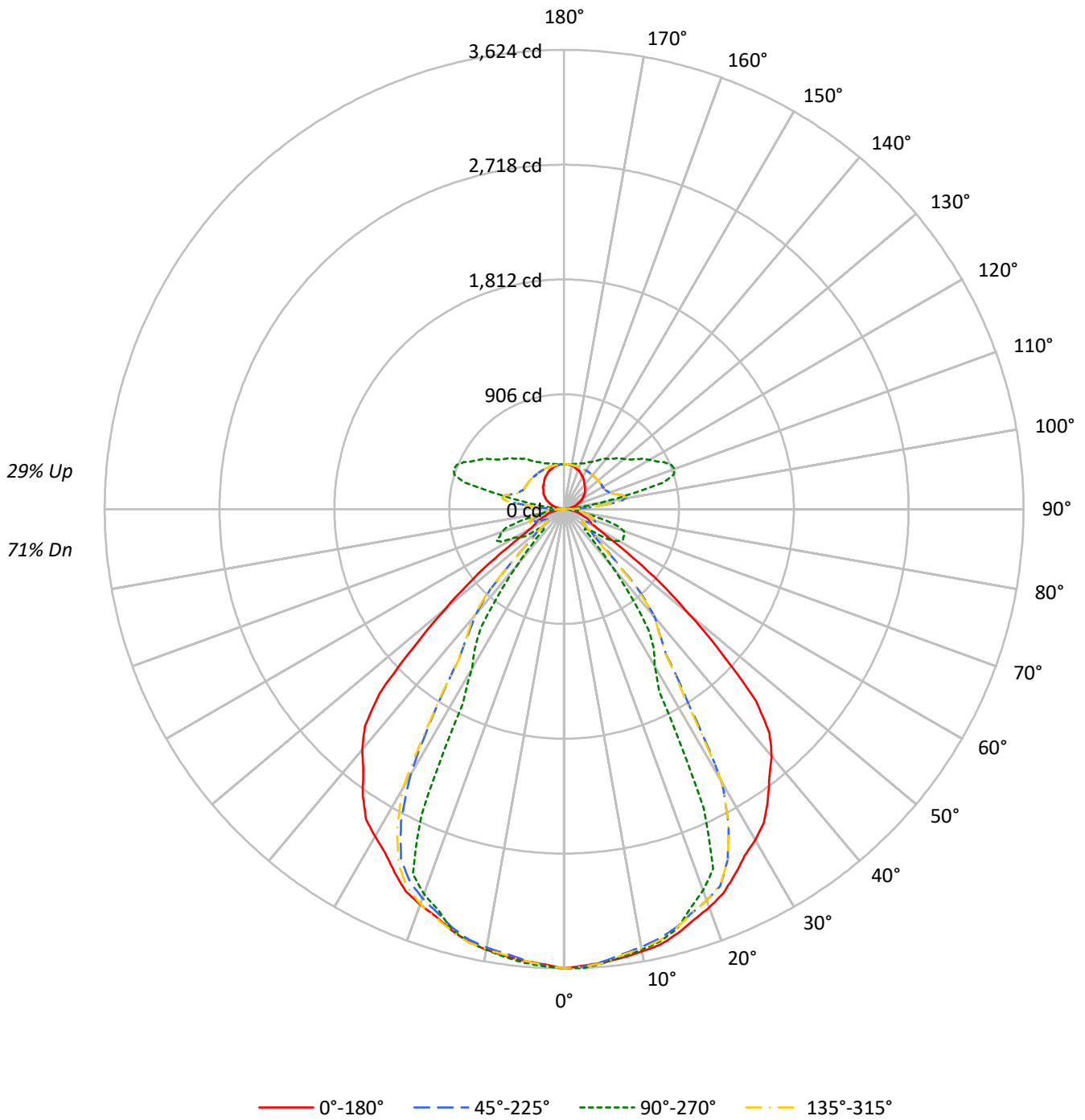
Lumens per Lamp: N/A
Luminaire Lumens: 7499.6 lumens
Efficiency: N/A
Efficacy: 117.2 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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	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°	58513	58513	58513	58513
5°	58204	58294	57982	58248
10°	58115	57890	57890	57890
15°	57927	57334	57469	57334
20°	57477	55036	57055	55553
25°	56721	46451	56333	47423
30°	56201	26649	55590	27005
35°	55215	22894	54515	22570
40°	53685	12039	52189	11923
45°	48802	5179	47056	5179
50°	32197	6247	30549	5835
55°	18002	11541	17078	10460
60°	9710	16239	9529	14564
65°	8562	19733	8978	22449
70°	7997	23613	7615	24902
75°	7505	20287	7673	20973
80°	6360	14486	6360	15249
85°	5576	8096	5076	9615

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 48802 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	341.0	4.5
10°-20°	967.5	12.9
20°-30°	1319.2	17.6
30°-40°	1108.6	14.8
40°-50°	629.7	8.4
50°-60°	334.1	4.5
60°-70°	307.6	4.1
70°-80°	225.8	3.0
80°-90°	59.4	0.8
90°-100°	141.5	1.9
100°-110°	448.9	6.0
110°-120°	440.2	5.9
120°-130°	358.2	4.8
130°-140°	292.1	3.9
140°-150°	227.7	3.0
150°-160°	164.1	2.2
160°-170°	100.2	1.3
170°-180°	33.8	0.5
0°-30°	2627.8	35.0
0°-40°	3736.4	49.8
0°-60°	4700.1	62.7
0°-90°	5293.0	70.6
90°-120°	1030.6	13.7
90°-150°	1908.6	25.4
90°-180°	2207.0	29.4
0°-180°	7499.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3624	3624	3624	3624	3624	
5°	3591	3597	3578	3594	3591	341
15°	3466	3430	3438	3430	3466	977
25°	3184	2607	3162	2662	3184	1468
35°	2801	1162	2766	1145	2801	1749
45°	2137	227	2061	227	2137	1563
55°	640	410	607	372	640	616
65°	224	516	235	588	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	808	78	808	78	82
115°	140	874	140	874	140	138
125°	193	686	193	686	193	172
135°	234	564	234	564	234	180
145°	273	470	273	470	273	171
155°	311	401	311	401	311	143
165°	339	369	339	369	339	96
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°	3624.0	3624.0	3624.0	3624.0	3624.0	3624.0	3624.0	3624.0	3624.0	3624.0	3624.0
2.5°	3604.3	3657.8	3610.9	3604.8	3624.0	3619.7	3613.1	3638.3	3595.5	3638.3	3604.3
5°	3591.2	3652.7	3583.0	3564.6	3596.7	3575.3	3593.9	3630.9	3577.5	3625.6	3572.1
7.5°	3568.8	3623.2	3539.8	3528.0	3559.5	3540.7	3548.6	3600.0	3555.1	3586.7	3538.1
10°	3544.7	3592.8	3509.2	3501.7	3531.0	3512.3	3520.2	3573.8	3531.0	3560.4	3511.9
12.5°	3518.5	3555.9	3472.1	3468.8	3493.9	3481.6	3485.2	3530.3	3496.0	3525.5	3479.2
15°	3465.5	3500.2	3416.3	3403.3	3430.0	3419.2	3424.5	3464.9	3438.1	3456.9	3416.3
17.5°	3399.9	3427.7	3344.2	3304.8	3305.8	3319.3	3344.2	3392.7	3368.7	3393.3	3335.9
20°	3345.2	3377.3	3285.1	3208.5	3203.1	3216.4	3285.1	3334.0	3320.6	3347.3	3266.0
22.5°	3281.8	3303.2	3219.5	3090.1	3071.9	3085.3	3210.8	3268.6	3263.8	3281.9	3180.7
25°	3183.9	3205.3	3052.8	2866.5	2607.4	2850.4	3058.2	3162.1	3162.1	3178.2	3044.6
27.5°	3084.5	3085.0	2809.0	1841.0	1623.9	1774.7	2805.2	3030.4	3056.1	3048.0	2785.5
30°	3014.5	2995.9	2489.8	1488.1	1429.4	1466.7	2492.5	2938.9	2981.7	2952.3	2427.0
32.5°	2933.6	2880.8	1838.3	1368.2	1320.1	1353.2	1777.6	2830.4	2905.2	2841.6	1908.8
35°	2801.3	2662.4	1402.0	1209.6	1161.5	1204.3	1391.2	2616.2	2765.8	2594.8	1448.5
37.5°	2658.7	2116.2	1234.2	963.5	859.8	942.7	1228.2	2093.6	2600.8	2044.9	1233.2
40°	2547.1	1662.6	1109.6	704.8	571.2	664.7	1101.4	1586.3	2476.1	1706.5	1082.3
42.5°	2398.6	1460.5	891.0	447.7	350.4	409.7	854.3	1426.8	2323.1	1478.6	861.4
45°	2137.3	1255.4	527.5	245.6	226.8	237.5	486.5	1232.3	2060.8	1205.6	538.4
47.5°	1692.9	957.4	338.9	208.7	229.0	208.7	328.5	927.1	1598.8	925.4	338.4
50°	1281.8	747.4	262.3	211.3	248.7	211.3	254.2	721.8	1216.2	788.7	259.6
52.5°	949.5	624.5	214.2	231.7	299.0	236.0	208.2	607.9	901.4	636.2	202.8
55°	639.5	489.9	172.1	305.8	410.0	313.7	172.1	475.8	606.7	470.4	166.7
57.5°	405.6	364.4	174.4	393.0	467.9	400.6	177.1	351.3	389.2	352.9	153.0
60°	300.7	287.2	194.1	417.4	502.9	422.7	196.8	276.5	295.1	273.7	164.0
62.5°	248.2	226.2	233.3	452.0	522.6	440.2	238.3	215.8	258.0	206.6	181.5
65°	224.1	146.7	276.0	457.8	516.5	457.8	278.7	138.9	235.0	149.5	246.0
67.5°	202.2	108.8	266.7	454.6	519.8	455.7	260.2	103.8	194.1	101.1	251.5
70°	169.4	97.3	251.5	462.7	500.2	446.7	251.5	94.5	161.3	91.8	295.1
72.5°	141.0	92.3	233.9	427.3	443.3	411.2	236.2	91.9	141.6	82.7	277.7
75°	120.3	90.9	224.1	341.3	325.2	325.2	218.6	88.3	123.0	83.0	215.9
77.5°	90.2	80.6	185.8	222.7	210.5	210.5	182.5	77.7	85.8	73.0	175.4
80°	68.4	73.7	153.0	163.8	155.8	155.8	147.6	71.0	68.4	68.4	144.9
82.5°	53.1	62.7	118.0	120.1	114.2	112.1	114.8	62.1	53.1	57.3	112.0
85°	30.1	43.5	62.8	51.7	43.7	41.1	60.1	40.7	27.4	40.7	60.1
87.5°	11.0	19.7	9.4	9.4	9.4	9.4	9.4	19.7	11.0	17.5	11.7
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	26.4	18.6	26.4	79.3	24.8	6.2	24.8	79.3
95°	19.0	57.3	257.0	95.3	61.4	95.3	257.0	57.3	19.0	57.3	257.0
97.5°	35.3	74.2	435.4	272.1	166.9	272.1	435.4	74.2	35.3	74.2	435.4
100°	47.0	84.1	496.1	452.3	293.9	452.3	496.1	84.1	47.0	84.1	496.1
102.5°	59.4	94.8	485.4	664.3	508.5	664.3	485.4	94.8	59.4	94.8	485.4
105°	78.2	109.9	442.5	842.9	807.9	842.9	442.5	109.9	78.2	109.9	442.5
107.5°	97.0	126.3	401.6	861.5	908.7	861.5	401.6	126.3	97.0	126.3	401.6
110°	109.5	137.9	381.0	840.0	927.5	840.0	381.0	137.9	109.5	137.9	381.0



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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°	122.0	148.7	369.4	803.0	914.0	803.0	369.4	148.7	122.0	148.7	369.4
115°	139.6	165.9	357.6	742.7	873.9	742.7	357.6	165.9	139.6	165.9	357.6
117.5°	156.8	181.7	352.9	684.7	816.8	684.7	352.9	181.7	156.8	181.7	352.9
120°	167.6	191.7	351.9	648.8	776.7	648.8	351.9	191.7	167.6	191.7	351.9
122.5°	178.4	201.5	351.9	619.9	739.1	619.9	351.9	201.5	178.4	201.5	351.9
125°	193.3	216.3	351.9	582.4	686.1	582.4	351.9	216.3	193.3	216.3	351.9
127.5°	206.5	228.6	351.9	553.2	641.7	553.2	351.9	228.6	206.5	228.6	351.9
130°	214.6	237.5	351.9	536.0	615.7	536.0	351.9	237.5	214.6	237.5	351.9
132.5°	222.6	245.6	351.2	522.4	594.2	522.4	351.2	245.6	222.6	245.6	351.2
135°	233.6	256.4	349.8	501.0	564.4	501.0	349.8	256.4	233.6	256.4	349.8
137.5°	244.3	268.3	349.6	480.4	537.1	480.4	349.6	268.3	244.3	268.3	349.6
140°	251.5	275.4	348.7	466.0	517.4	466.0	348.7	275.4	251.5	275.4	348.7
142.5°	260.4	283.5	349.6	451.6	499.5	451.6	349.6	283.5	260.4	283.5	349.6
145°	272.6	293.4	349.8	432.2	470.4	432.2	349.8	293.4	272.6	293.4	349.8
147.5°	285.0	302.6	350.0	415.1	446.3	415.1	350.0	302.6	285.0	302.6	350.0
150°	293.9	308.0	350.9	405.1	430.3	405.1	350.9	308.0	293.9	308.0	350.9
152.5°	301.0	313.5	350.9	397.0	417.7	397.0	350.9	313.5	301.0	313.5	350.9
155°	310.6	321.6	350.9	385.9	401.2	385.9	350.9	321.6	310.6	321.6	350.9
157.5°	320.9	328.4	351.9	379.1	389.5	379.1	351.9	328.4	320.9	328.4	351.9
160°	326.3	332.8	351.9	374.6	383.3	374.6	351.9	332.8	326.3	332.8	351.9
162.5°	331.7	336.4	351.9	371.0	377.1	371.0	351.9	336.4	331.7	336.4	351.9
165°	338.6	341.9	351.9	365.5	368.8	365.5	351.9	341.9	338.6	341.9	351.9
167.5°	345.0	345.9	353.1	361.7	364.5	361.7	353.1	345.9	345.0	345.9	353.1
170°	348.7	348.7	353.1	359.9	360.9	359.9	353.1	348.7	348.7	348.7	353.1
172.5°	350.5	351.3	353.1	358.1	358.3	358.1	353.1	351.3	350.5	351.3	353.1
175°	354.2	353.2	354.2	356.5	355.3	356.5	354.2	353.2	354.2	353.2	354.2
177.5°	355.3	354.4	354.4	356.2	354.4	356.2	354.4	354.4	355.3	354.4	354.4
180°	355.3	355.3	355.3	355.3	355.3	355.3	355.3	355.3	355.3	355.3	355.3



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3624.0	3624.0	3624.0	3624.0	3624.0	3624.0
2.5°	3595.9	3610.9	3610.9	3602.1	3645.0	3604.3
5°	3559.2	3593.9	3577.9	3577.5	3631.3	3591.2
7.5°	3533.5	3566.1	3551.0	3548.0	3600.8	3568.8
10°	3507.0	3531.0	3520.4	3528.3	3576.8	3544.7
12.5°	3469.9	3498.3	3487.6	3499.9	3544.1	3518.5
15°	3405.9	3430.0	3435.3	3440.9	3492.2	3465.5
17.5°	3300.2	3311.9	3338.6	3376.4	3429.8	3399.9
20°	3217.1	3233.2	3249.2	3315.2	3377.3	3345.2
22.5°	3122.6	3117.3	3154.7	3232.0	3309.7	3281.8
25°	2867.7	2662.0	2889.1	3088.3	3192.0	3183.9
27.5°	1996.7	1732.7	1966.3	2850.5	3068.5	3084.5
30°	1571.4	1448.5	1568.7	2544.4	2977.1	3014.5
32.5°	1395.2	1310.8	1384.0	1936.6	2862.0	2933.6
35°	1204.0	1145.1	1204.0	1448.5	2635.6	2801.3
37.5°	963.6	843.4	961.6	1251.7	2130.7	2658.7
40°	718.0	565.7	696.7	1120.6	1702.7	2547.1
42.5°	478.5	364.6	452.8	882.2	1472.9	2398.6
45°	258.9	226.8	248.2	532.9	1201.9	2137.3
47.5°	203.0	214.8	203.0	336.2	919.5	1692.9
50°	194.9	232.3	194.9	259.6	760.7	1281.8
52.5°	212.4	252.0	210.3	204.9	620.7	949.5
55°	240.7	371.6	243.4	166.7	455.2	639.5
57.5°	342.8	418.1	346.5	158.0	350.5	405.6
60°	352.1	451.0	349.5	166.7	271.3	300.7
62.5°	416.5	558.1	415.9	190.8	201.7	248.2
65°	534.1	587.6	539.5	243.2	143.9	224.1
67.5°	507.0	545.0	501.7	260.7	99.1	202.2
70°	498.0	527.5	492.7	297.9	92.0	169.4
72.5°	464.7	468.4	455.0	276.0	82.7	141.0
75°	360.2	336.2	346.9	237.8	82.8	120.3
77.5°	223.8	214.2	215.9	181.5	73.1	90.2
80°	169.3	164.0	161.3	153.0	68.4	68.4
82.5°	125.6	120.3	117.6	118.0	57.3	53.1
85°	57.3	51.9	49.2	68.4	40.7	30.1
87.5°	11.7	11.7	9.5	11.7	15.4	11.0
90°	3.4	3.4	3.4	3.4	1.1	0.0
92.5°	26.4	18.6	26.4	79.3	24.8	6.2
95°	95.3	61.4	95.3	257.0	57.3	19.0
97.5°	272.1	166.9	272.1	435.4	74.2	35.3
100°	452.3	293.9	452.3	496.1	84.1	47.0
102.5°	664.3	508.5	664.3	485.4	94.8	59.4
105°	842.9	807.9	842.9	442.5	109.9	78.2
107.5°	861.5	908.7	861.5	401.6	126.3	97.0
110°	840.0	927.5	840.0	381.0	137.9	109.5



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	803.0	914.0	803.0	369.4	148.7	122.0
115°	742.7	873.9	742.7	357.6	165.9	139.6
117.5°	684.7	816.8	684.7	352.9	181.7	156.8
120°	648.8	776.7	648.8	351.9	191.7	167.6
122.5°	619.9	739.1	619.9	351.9	201.5	178.4
125°	582.4	686.1	582.4	351.9	216.3	193.3
127.5°	553.2	641.7	553.2	351.9	228.6	206.5
130°	536.0	615.7	536.0	351.9	237.5	214.6
132.5°	522.4	594.2	522.4	351.2	245.6	222.6
135°	501.0	564.4	501.0	349.8	256.4	233.6
137.5°	480.4	537.1	480.4	349.6	268.3	244.3
140°	466.0	517.4	466.0	348.7	275.4	251.5
142.5°	451.6	499.5	451.6	349.6	283.5	260.4
145°	432.2	470.4	432.2	349.8	293.4	272.6
147.5°	415.1	446.3	415.1	350.0	302.6	285.0
150°	405.1	430.3	405.1	350.9	308.0	293.9
152.5°	397.0	417.7	397.0	350.9	313.5	301.0
155°	385.9	401.2	385.9	350.9	321.6	310.6
157.5°	379.1	389.5	379.1	351.9	328.4	320.9
160°	374.6	383.3	374.6	351.9	332.8	326.3
162.5°	371.0	377.1	371.0	351.9	336.4	331.7
165°	365.5	368.8	365.5	351.9	341.9	338.6
167.5°	361.7	364.5	361.7	353.1	345.9	345.0
170°	359.9	360.9	359.9	353.1	348.7	348.7
172.5°	358.1	358.3	358.1	353.1	351.3	350.5
175°	356.5	355.3	356.5	354.2	353.2	354.2
177.5°	356.2	354.4	356.2	354.4	354.4	355.3
180°	355.3	355.3	355.3	355.3	355.3	355.3



TEST NUMBER: P855258

CATALOG NUMBER: SQ2-FA-050U-125D-835-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	15.85	16.77	16.63	17.55	18.50	14.70	15.62	15.49	16.41	17.36
	3H	16.55	17.37	17.35	18.17	19.15	20.86	21.68	21.66	22.48	23.46
	4H	16.97	17.74	17.78	18.54	19.54	22.14	22.91	22.95	23.72	24.71
	6H	17.32	18.04	18.15	18.85	19.86	22.75	23.46	23.57	24.27	25.28
	8H	17.44	18.12	18.28	18.95	19.96	22.88	23.55	23.71	24.38	25.39
	12H	17.52	18.16	18.35	18.98	20.02	22.92	23.56	23.76	24.38	25.42
4H	2H	16.25	17.02	17.07	17.83	18.82	15.24	16.02	16.06	16.82	17.82
	3H	17.25	17.90	18.08	18.73	19.74	21.57	22.22	22.40	23.06	24.07
	4H	17.82	18.40	18.65	19.24	20.28	23.03	23.61	23.86	24.45	25.49
	6H	18.30	18.80	19.15	19.66	20.71	23.77	24.27	24.62	25.13	26.18
	8H	18.47	18.94	19.33	19.80	20.85	23.94	24.41	24.79	25.26	26.32
	12H	18.59	19.01	19.46	19.89	20.94	24.00	24.42	24.88	25.30	26.36
8H	4H	18.92	19.39	19.78	20.25	21.30	23.16	23.63	24.01	24.48	25.54
	6H	19.53	19.92	20.42	20.82	21.87	24.04	24.42	24.92	25.32	26.38
	8H	19.77	20.11	20.66	21.00	22.07	24.29	24.63	25.18	25.52	26.59
	12H	19.94	20.24	20.84	21.13	22.25	24.41	24.71	25.31	25.59	26.72
12H	4H	19.07	19.49	19.94	20.37	21.43	23.12	23.54	23.99	24.42	25.48
	6H	19.81	20.15	20.70	21.04	22.11	24.05	24.39	24.94	25.28	26.35
	8H	20.11	20.41	21.00	21.29	22.42	24.33	24.63	25.23	25.51	26.64