

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: P853751

Luminaire Tested: SQ2-FA-025U-125D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853751
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-9, G2-2308-131-11)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-FA-025U-125D-940-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1250 LUMENS PER FOOT
UPLIGHT 250 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

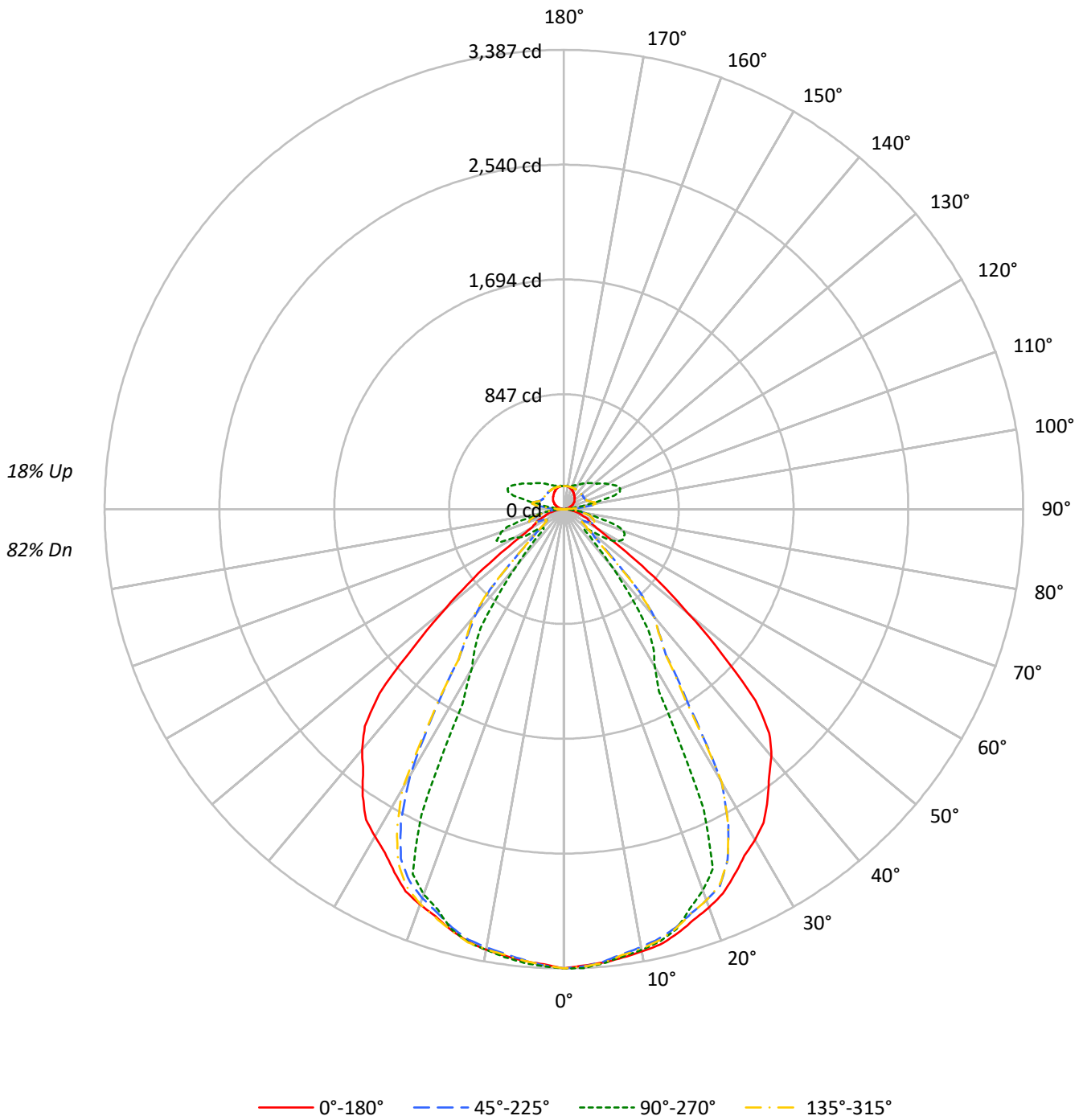
Lumens per Lamp: N/A
Luminaire Lumens: 6010.1 lumens
Efficiency: N/A
Efficacy: 106.2 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 56.6
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	0
RCR																		
0	115	115	115	115	110	110	110	110	101	101	101	93	93	93	86	86	86	82
1	107	103	99	96	102	99	96	93	92	89	87	85	83	81	79	77	76	73
2	99	92	87	82	95	89	84	80	83	79	76	77	74	71	72	69	67	64
3	92	83	77	72	88	81	75	70	75	70	66	70	67	63	66	63	60	57
4	86	76	69	63	82	73	67	62	69	64	59	65	60	57	61	57	54	52
5	80	69	62	56	77	67	60	55	63	58	53	60	55	51	56	52	49	47
6	75	64	56	51	72	62	55	50	58	53	48	55	50	47	52	48	45	43
7	70	59	51	46	67	57	50	45	54	48	44	51	46	43	49	44	41	39
8	66	54	47	42	63	53	46	42	50	45	40	48	43	39	46	41	38	36
9	62	51	44	39	60	49	43	38	47	41	37	45	40	36	43	38	35	33
10	59	47	40	36	57	46	40	35	44	38	34	42	37	34	40	36	33	31

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	5.3
10°-20°	904.3	15.0
20°-30°	1233.1	20.5
30°-40°	1036.2	17.2
40°-50°	588.5	9.8
50°-60°	312.3	5.2
60°-70°	287.5	4.8
70°-80°	211.1	3.5
80°-90°	55.6	0.9
90°-100°	69.3	1.2
100°-110°	215.5	3.6
110°-120°	210.9	3.5
120°-130°	172.1	2.9
130°-140°	140.8	2.3
140°-150°	109.9	1.8
150°-160°	79.3	1.3
160°-170°	48.5	0.8
170°-180°	16.3	0.3
0°-30°	2456.2	40.9
0°-40°	3492.4	58.1
0°-60°	4393.2	73.1
0°-90°	4947.3	82.3
90°-120°	495.7	8.2
90°-150°	918.5	15.3
90°-180°	1063.0	17.7
0°-180°	6010.1	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°	10	30	10	30	10	11
105°	38	387	38	387	38	40
115°	67	416	67	416	67	66
125°	94	328	94	328	94	83
135°	112	271	112	271	112	87
145°	131	227	131	227	131	82
155°	150	193	150	193	150	69
165°	165	179	165	179	165	46
175°	171	171	171	171	171	16
180°	171	171	171	171	171	



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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	3.2	3.2	3.2	3.2	3.2	1.0	0.0	1.0	3.2
92.5°	3.4	11.8	40.1	13.2	10.7	13.2	40.1	11.8	3.4	11.8	40.1
95°	9.5	27.9	127.1	46.9	30.5	46.9	127.1	27.9	9.5	27.9	127.1
97.5°	17.2	36.3	210.5	131.0	82.6	131.0	210.5	36.3	17.2	36.3	210.5
100°	23.1	40.6	237.4	222.1	148.1	222.1	237.4	40.6	23.1	40.6	237.4
102.5°	29.0	45.6	232.4	317.2	249.0	317.2	232.4	45.6	29.0	45.6	232.4
105°	37.8	53.2	212.2	405.1	386.6	405.1	212.2	53.2	37.8	53.2	212.2
107.5°	46.6	61.0	192.9	411.8	432.2	411.8	192.9	61.0	46.6	61.0	192.9
110°	52.5	66.9	182.8	402.2	442.2	402.2	182.8	66.9	52.5	66.9	182.8



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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°	58.4	72.0	177.7	384.8	435.5	384.8	177.7	72.0	58.4	72.0	177.7
115°	67.2	79.6	172.3	355.4	416.0	355.4	172.3	79.6	67.2	79.6	172.3
117.5°	75.8	87.1	170.0	327.3	389.3	327.3	170.0	87.1	75.8	87.1	170.0
120°	80.9	92.2	169.1	311.2	370.8	311.2	169.1	92.2	80.9	92.2	169.1
122.5°	85.9	97.2	170.0	297.7	352.3	297.7	170.0	97.2	85.9	97.2	170.0
125°	93.5	103.8	170.2	279.5	327.7	279.5	170.2	103.8	93.5	103.8	170.2
127.5°	99.6	110.1	170.2	265.9	306.9	265.9	170.2	110.1	99.6	110.1	170.2
130°	102.9	114.2	170.2	258.2	295.2	258.2	170.2	114.2	102.9	114.2	170.2
132.5°	107.1	118.4	169.3	251.4	285.9	251.4	169.3	118.4	107.1	118.4	169.3
135°	112.4	124.7	169.1	241.2	271.0	241.2	169.1	124.7	112.4	124.7	169.1
137.5°	118.5	129.8	169.1	231.1	258.2	231.1	169.1	129.8	118.5	129.8	169.1
140°	121.9	133.2	169.1	224.3	249.0	224.3	169.1	133.2	121.9	133.2	169.1
142.5°	126.1	136.5	169.1	217.5	239.7	217.5	169.1	136.5	126.1	136.5	169.1
145°	131.3	141.6	169.1	208.4	226.9	208.4	169.1	141.6	131.3	141.6	169.1
147.5°	137.6	146.4	170.2	199.9	214.5	199.9	170.2	146.4	137.6	146.4	170.2
150°	141.8	149.0	170.2	195.6	206.9	195.6	170.2	149.0	141.8	149.0	170.2
152.5°	145.2	151.5	170.2	191.4	201.1	191.4	170.2	151.5	145.2	151.5	170.2
155°	150.2	155.4	170.2	187.1	193.3	187.1	170.2	155.4	150.2	155.4	170.2
157.5°	155.3	159.2	170.2	183.3	187.2	183.3	170.2	159.2	155.3	159.2	170.2
160°	158.6	161.7	170.2	180.8	183.8	180.8	170.2	161.7	158.6	161.7	170.2
162.5°	161.1	163.4	170.2	179.1	181.3	179.1	170.2	163.4	161.1	163.4	170.2
165°	164.9	166.0	171.2	176.5	178.6	176.5	171.2	166.0	164.9	166.0	171.2
167.5°	167.2	167.4	170.2	175.0	176.1	175.0	170.2	167.4	167.2	167.4	170.2
170°	168.1	169.1	170.2	173.4	174.4	173.4	170.2	169.1	168.1	169.1	170.2
172.5°	169.8	170.0	171.0	172.5	172.7	172.5	171.0	170.0	169.8	170.0	171.0
175°	171.2	171.2	171.2	172.3	171.2	172.3	171.2	171.2	171.2	171.2	171.2
177.5°	171.2	171.2	171.2	171.2	171.2	171.2	171.2	171.2	171.2	171.2	171.2
180°	171.2	171.2	171.2	171.2	171.2	171.2	171.2	171.2	171.2	171.2	171.2



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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	8.9	10.8	14.4	10.2
90°	3.2	3.2	3.2	3.2	1.0	0.0
92.5°	13.2	10.7	13.2	40.1	11.8	3.4
95°	46.9	30.5	46.9	127.1	27.9	9.5
97.5°	131.0	82.6	131.0	210.5	36.3	17.2
100°	222.1	148.1	222.1	237.4	40.6	23.1
102.5°	317.2	249.0	317.2	232.4	45.6	29.0
105°	405.1	386.6	405.1	212.2	53.2	37.8
107.5°	411.8	432.2	411.8	192.9	61.0	46.6
110°	402.2	442.2	402.2	182.8	66.9	52.5



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	384.8	435.5	384.8	177.7	72.0	58.4
115°	355.4	416.0	355.4	172.3	79.6	67.2
117.5°	327.3	389.3	327.3	170.0	87.1	75.8
120°	311.2	370.8	311.2	169.1	92.2	80.9
122.5°	297.7	352.3	297.7	170.0	97.2	85.9
125°	279.5	327.7	279.5	170.2	103.8	93.5
127.5°	265.9	306.9	265.9	170.2	110.1	99.6
130°	258.2	295.2	258.2	170.2	114.2	102.9
132.5°	251.4	285.9	251.4	169.3	118.4	107.1
135°	241.2	271.0	241.2	169.1	124.7	112.4
137.5°	231.1	258.2	231.1	169.1	129.8	118.5
140°	224.3	249.0	224.3	169.1	133.2	121.9
142.5°	217.5	239.7	217.5	169.1	136.5	126.1
145°	208.4	226.9	208.4	169.1	141.6	131.3
147.5°	199.9	214.5	199.9	170.2	146.4	137.6
150°	195.6	206.9	195.6	170.2	149.0	141.8
152.5°	191.4	201.1	191.4	170.2	151.5	145.2
155°	187.1	193.3	187.1	170.2	155.4	150.2
157.5°	183.3	187.2	183.3	170.2	159.2	155.3
160°	180.8	183.8	180.8	170.2	161.7	158.6
162.5°	179.1	181.3	179.1	170.2	163.4	161.1
165°	176.5	178.6	176.5	171.2	166.0	164.9
167.5°	175.0	176.1	175.0	170.2	167.4	167.2
170°	173.4	174.4	173.4	170.2	169.1	168.1
172.5°	172.5	172.7	172.5	171.0	170.0	169.8
175°	172.3	171.2	172.3	171.2	171.2	171.2
177.5°	171.2	171.2	171.2	171.2	171.2	171.2
180°	171.2	171.2	171.2	171.2	171.2	171.2

TEST NUMBER: P853751

CATALOG NUMBER: SQ2-FA-025U-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	16.54	17.58	17.18	18.22	18.94	15.40	16.44	16.04	17.07	17.80
	3H	17.25	18.18	17.90	18.83	19.59	21.56	22.49	22.21	23.14	23.90
	4H	17.67	18.54	18.34	19.20	19.98	22.84	23.72	23.52	24.38	25.16
	6H	18.03	18.84	18.72	19.51	20.30	23.46	24.26	24.14	24.93	25.72
	8H	18.15	18.92	18.85	19.61	20.40	23.59	24.35	24.28	25.04	25.84
	12H	18.23	18.96	18.93	19.64	20.46	23.63	24.36	24.33	25.04	25.86
4H	2H	16.95	17.83	17.63	18.49	19.27	15.95	16.82	16.62	17.48	18.26
	3H	17.96	18.69	18.65	19.39	20.18	22.29	23.01	22.97	23.71	24.51
	4H	18.53	19.19	19.23	19.89	20.72	23.74	24.40	24.44	25.10	25.93
	6H	19.01	19.58	19.74	20.31	21.15	24.49	25.06	25.21	25.78	26.62
	8H	19.19	19.72	19.91	20.44	21.29	24.66	25.19	25.38	25.91	26.76
	12H	19.31	19.78	20.06	20.53	21.39	24.73	25.20	25.47	25.95	26.80
8H	4H	19.64	20.17	20.37	20.90	21.74	23.87	24.41	24.60	25.13	25.98
	6H	20.25	20.69	21.01	21.46	22.31	24.76	25.20	25.51	25.96	26.81
	8H	20.49	20.88	21.26	21.65	22.51	25.01	25.40	25.78	26.17	27.03
	12H	20.67	21.01	21.44	21.77	22.70	25.14	25.48	25.91	26.24	27.17
12H	4H	19.79	20.27	20.54	21.02	21.87	23.84	24.32	24.59	25.07	25.92
	6H	20.53	20.92	21.30	21.69	22.55	24.77	25.16	25.54	25.93	26.79
	8H	20.84	21.18	21.61	21.93	22.86	25.06	25.40	25.83	26.15	27.08