

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: P855463

Luminaire Tested: SQ2-FA-025U-100D-840-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855463
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-100D-840-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT
UPLIGHT 250 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

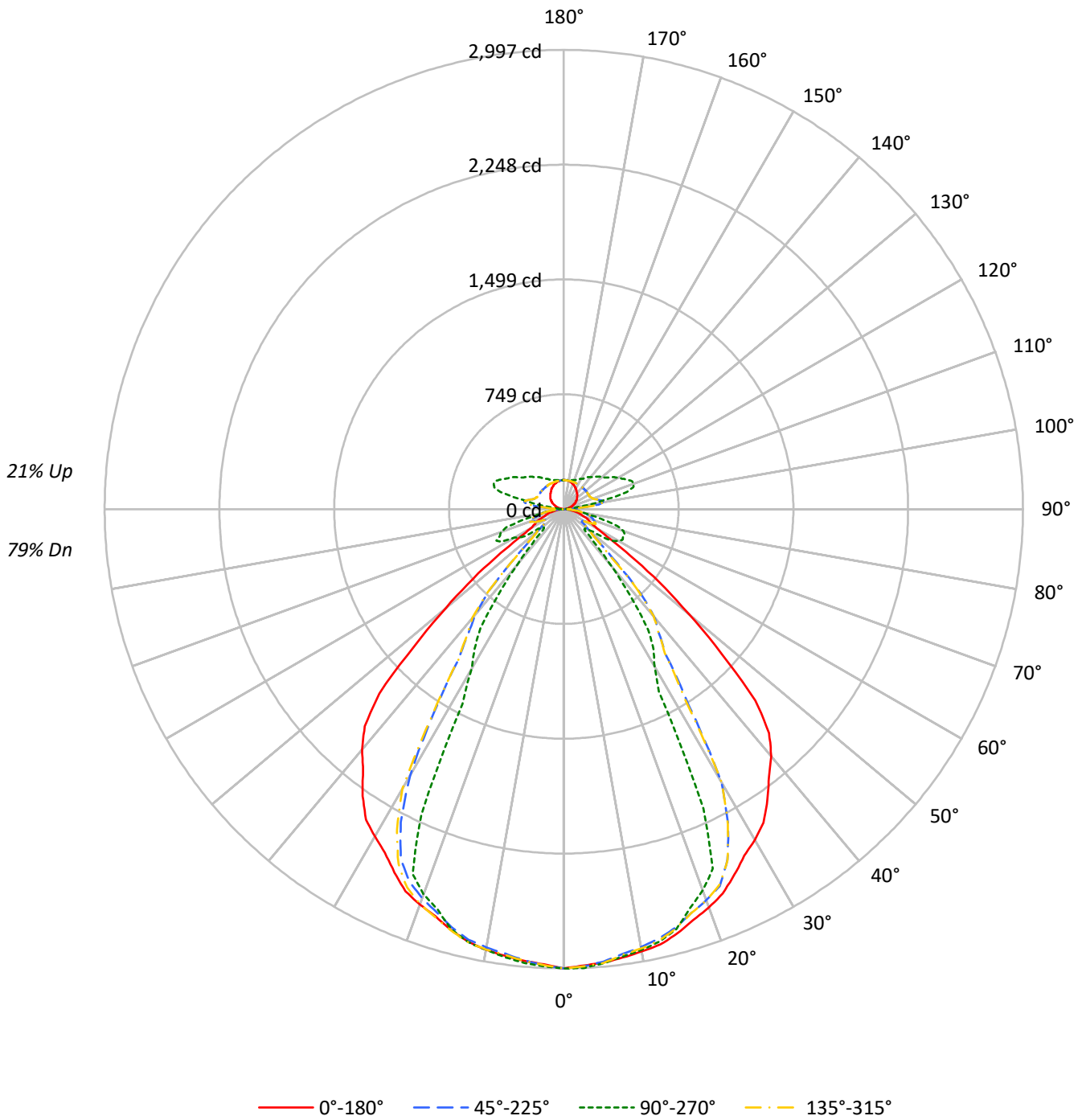
Lumens per Lamp: N/A
Luminaire Lumens: 5546.6 lumens
Efficiency: N/A
Efficacy: 123.3 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 45
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	114	114	114	114	109	109	109	109	99	99	99	91	91	91	83	83	83	79				79
1	106	102	99	95	101	98	95	92	90	87	85	82	81	79	76	74	73				70	
2	98	92	86	81	94	88	83	79	81	77	74	75	72	69	69	67	65				62	
3	91	83	76	71	87	80	74	69	74	69	65	68	65	61	63	60	58				55	
4	85	75	68	62	81	72	66	61	67	62	58	63	58	55	58	55	52				50	
5	79	69	61	56	76	66	59	54	62	56	52	58	53	50	54	50	47				45	
6	74	63	55	50	71	61	54	49	57	51	47	54	49	45	50	46	43				41	
7	69	58	51	45	66	56	49	45	53	47	43	50	45	41	47	43	40				38	
8	65	54	46	41	63	52	45	41	49	43	39	46	41	38	44	40	37				35	
9	61	50	43	38	59	48	42	37	46	40	36	43	38	35	41	37	34				32	
10	58	46	40	35	56	45	39	35	43	37	33	41	36	32	39	34	31				30	

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	48394	48394	48394	48394
5°	48138	48212	47955	48175
10°	48065	47880	47880	47880
15°	47910	47418	47532	47418
20°	47538	45519	47189	45945
25°	46912	38414	46591	39221
30°	46480	22040	45977	22335
35°	45667	18934	45086	18668
40°	44403	9959	43161	9862
45°	40361	4284	38915	4284
50°	26631	5167	25267	4828
55°	14891	9543	14125	8653
60°	8031	13430	7886	12042
65°	7079	16321	7427	18567
70°	6618	19525	6293	20592
75°	6201	16781	6344	17349
80°	5253	11985	5253	12617
85°	4594	6688	4187	7966

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 40361 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	282.1	5.1
10°-20°	800.2	14.4
20°-30°	1091.1	19.7
30°-40°	916.9	16.5
40°-50°	520.8	9.4
50°-60°	276.3	5.0
60°-70°	254.4	4.6
70°-80°	186.8	3.4
80°-90°	49.3	0.9
90°-100°	76.2	1.4
100°-110°	237.1	4.3
110°-120°	231.9	4.2
120°-130°	189.3	3.4
130°-140°	154.9	2.8
140°-150°	120.9	2.2
150°-160°	87.2	1.6
160°-170°	53.3	1.0
170°-180°	18.0	0.3
0°-30°	2173.3	39.2
0°-40°	3090.2	55.7
0°-60°	3887.3	70.1
0°-90°	4377.7	78.9
90°-120°	545.2	9.8
90°-150°	1010.4	18.2
90°-180°	1169.0	21.1
0°-180°	5546.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2997	2997	2997	2997	2997	
5°	2970	2975	2959	2972	2970	282
15°	2866	2837	2844	2837	2866	808
25°	2633	2156	2615	2202	2633	1214
35°	2317	961	2287	947	2317	1446
45°	1768	188	1704	188	1768	1292
55°	529	339	502	307	529	509
65°	185	427	194	486	185	186
75°	99	269	102	278	99	103
85°	25	36	23	43	25	28
90°	0	4	0	4	0	2
95°	10	34	10	34	10	12
105°	42	425	42	425	42	44
115°	74	458	74	458	74	73
125°	103	360	103	360	103	91
135°	124	298	124	298	124	96
145°	144	250	144	250	144	91
155°	165	213	165	213	165	76
165°	182	196	182	196	182	51
175°	188	188	188	188	188	18
180°	188	188	188	188	188	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2997.3	2997.3	2997.3	2997.3	2997.3	2997.3	2997.3	2997.3	2997.3	2997.3	2997.3
2.5°	2981.0	3025.1	2986.5	2981.3	2997.3	2993.7	2988.2	3009.1	2973.8	3009.1	2981.0
5°	2970.1	3021.0	2963.4	2948.1	2974.7	2957.0	2972.4	3003.0	2958.8	2998.6	2954.3
7.5°	2951.6	2996.7	2927.6	2917.8	2943.9	2928.4	2934.8	2977.4	2940.3	2966.4	2926.3
10°	2931.7	2971.4	2902.3	2896.1	2920.4	2904.9	2911.4	2955.8	2920.4	2944.7	2904.5
12.5°	2910.0	2940.9	2871.5	2868.9	2889.6	2879.5	2882.4	2919.8	2891.5	2915.8	2877.5
15°	2866.2	2894.9	2825.5	2814.7	2836.8	2828.0	2832.3	2865.6	2843.6	2859.0	2825.5
17.5°	2811.9	2834.8	2765.7	2733.2	2734.1	2745.2	2765.7	2806.1	2786.1	2806.5	2759.0
20°	2766.7	2793.2	2717.0	2653.6	2649.2	2660.3	2717.0	2757.5	2746.4	2768.4	2701.2
22.5°	2714.2	2731.9	2662.7	2555.7	2540.7	2551.8	2655.5	2703.3	2699.3	2714.3	2630.7
25°	2633.3	2651.1	2524.8	2370.8	2156.3	2357.5	2529.4	2615.3	2615.3	2628.6	2518.1
27.5°	2551.1	2551.5	2323.2	1522.6	1343.1	1467.7	2320.1	2506.3	2527.5	2520.9	2303.8
30°	2493.1	2477.8	2059.1	1230.8	1182.2	1213.1	2061.5	2430.7	2466.1	2441.7	2007.2
32.5°	2426.2	2382.5	1520.4	1131.5	1091.7	1119.1	1470.2	2340.9	2402.8	2350.1	1578.7
35°	2316.9	2201.9	1159.6	1000.5	960.6	996.1	1150.5	2163.7	2287.4	2146.1	1198.0
37.5°	2198.9	1750.2	1020.8	796.9	711.1	779.7	1015.8	1731.4	2151.0	1691.2	1019.8
40°	2106.7	1375.1	917.8	582.9	472.5	549.7	910.9	1311.9	2047.8	1411.4	895.1
42.5°	1983.7	1207.9	736.9	370.2	289.8	338.9	706.6	1180.1	1921.3	1222.9	712.5
45°	1767.6	1038.3	436.2	203.1	187.6	196.5	402.3	1019.1	1704.3	997.1	445.3
47.5°	1400.1	791.9	280.3	172.6	189.4	172.6	271.7	766.7	1322.3	765.3	279.8
50°	1060.2	618.1	217.0	174.7	205.7	174.7	210.2	597.0	1005.9	652.3	214.8
52.5°	785.2	516.5	177.3	191.6	247.3	195.1	172.2	502.8	745.5	526.2	167.7
55°	529.0	405.2	142.4	252.9	339.0	259.5	142.4	393.6	501.8	389.1	137.9
57.5°	335.4	301.4	144.2	325.1	387.0	331.3	146.5	290.5	321.9	291.8	126.6
60°	248.7	237.6	160.5	345.2	415.9	349.6	162.7	228.7	244.2	226.4	135.7
62.5°	205.2	187.2	193.0	373.9	432.1	364.1	197.1	178.4	213.4	171.0	150.1
65°	185.3	121.2	228.3	378.6	427.2	378.6	230.5	114.8	194.4	123.6	203.5
67.5°	167.2	90.0	220.6	376.0	429.9	376.9	215.1	85.8	160.5	83.6	207.9
70°	140.2	80.4	207.9	382.7	413.6	369.4	207.9	78.1	133.3	75.9	244.2
72.5°	116.7	76.5	193.5	353.3	366.6	340.1	195.3	76.0	117.1	68.4	229.7
75°	99.4	75.2	185.3	282.3	269.0	269.0	180.9	73.0	101.7	68.5	178.5
77.5°	74.6	66.7	153.7	184.2	174.0	174.0	151.0	64.3	71.0	60.4	145.1
80°	56.5	61.0	126.6	135.4	128.9	128.9	122.0	58.7	56.5	56.5	119.8
82.5°	43.8	51.9	97.7	99.3	94.5	92.8	95.0	51.4	43.8	47.4	92.6
85°	24.8	35.9	52.0	42.8	36.1	33.9	49.8	33.7	22.6	33.7	49.8
87.5°	9.1	16.3	7.9	7.9	7.9	7.9	7.9	16.3	9.1	14.6	9.8
90°	0.0	1.2	3.5	3.5	3.5	3.5	3.5	1.2	0.0	1.2	3.5
92.5°	3.7	12.9	44.2	14.5	11.8	14.5	44.2	12.9	3.7	12.9	44.2
95°	10.4	30.8	139.8	51.6	33.6	51.6	139.8	30.8	10.4	30.8	139.8
97.5°	19.0	40.0	231.6	144.2	90.8	144.2	231.6	40.0	19.0	40.0	231.6
100°	25.4	44.6	261.2	244.3	162.9	244.3	261.2	44.6	25.4	44.6	261.2
102.5°	31.9	50.2	255.6	348.8	273.9	348.8	255.6	50.2	31.9	50.2	255.6
105°	41.6	58.5	233.4	445.5	425.3	445.5	233.4	58.5	41.6	58.5	233.4
107.5°	51.3	67.1	212.1	453.0	475.4	453.0	212.1	67.1	51.3	67.1	212.1
110°	57.8	73.5	201.0	442.4	486.4	442.4	201.0	73.5	57.8	73.5	201.0



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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°	64.2	79.1	195.6	423.3	479.1	423.3	195.6	79.1	64.2	79.1	195.6
115°	74.0	87.5	189.5	390.9	457.5	390.9	189.5	87.5	74.0	87.5	189.5
117.5°	83.4	95.8	186.9	360.0	428.2	360.0	186.9	95.8	83.4	95.8	186.9
120°	88.9	101.4	186.0	342.4	407.9	342.4	186.0	101.4	88.9	101.4	186.0
122.5°	94.5	107.0	186.9	327.5	387.5	327.5	186.9	107.0	94.5	107.0	186.9
125°	102.8	114.1	187.2	307.4	360.5	307.4	187.2	114.1	102.8	114.1	187.2
127.5°	109.5	121.1	187.2	292.4	337.6	292.4	187.2	121.1	109.5	121.1	187.2
130°	113.3	125.6	187.2	284.0	324.7	284.0	187.2	125.6	113.3	125.6	187.2
132.5°	117.8	130.3	186.2	276.5	314.5	276.5	186.2	130.3	117.8	130.3	186.2
135°	123.6	137.2	186.0	265.4	298.1	265.4	186.0	137.2	123.6	137.2	186.0
137.5°	130.3	142.8	186.0	254.2	284.0	254.2	186.0	142.8	130.3	142.8	186.0
140°	134.0	146.5	186.0	246.7	273.9	246.7	186.0	146.5	134.0	146.5	186.0
142.5°	138.7	150.2	186.0	239.3	263.6	239.3	186.0	150.2	138.7	150.2	186.0
145°	144.4	155.7	186.0	229.2	249.6	229.2	186.0	155.7	144.4	155.7	186.0
147.5°	151.4	161.1	187.2	219.9	236.0	219.9	187.2	161.1	151.4	161.1	187.2
150°	155.9	163.9	187.2	215.2	227.6	215.2	187.2	163.9	155.9	163.9	187.2
152.5°	159.7	166.7	187.2	210.6	221.2	210.6	187.2	166.7	159.7	166.7	187.2
155°	165.3	170.8	187.2	205.8	212.6	205.8	187.2	170.8	165.3	170.8	187.2
157.5°	170.7	175.0	187.2	201.6	205.9	201.6	187.2	175.0	170.7	175.0	187.2
160°	174.5	177.8	187.2	198.8	202.2	198.8	187.2	177.8	174.5	177.8	187.2
162.5°	177.3	179.7	187.2	197.0	199.4	197.0	187.2	179.7	177.3	179.7	187.2
165°	181.5	182.5	188.3	194.2	196.4	194.2	188.3	182.5	181.5	182.5	188.3
167.5°	183.9	184.1	187.2	192.5	193.7	192.5	187.2	184.1	183.9	184.1	187.2
170°	184.8	186.0	187.2	190.7	191.8	190.7	187.2	186.0	184.8	186.0	187.2
172.5°	186.7	186.9	188.1	189.7	190.0	189.7	188.1	186.9	186.7	186.9	188.1
175°	188.3	188.3	188.3	189.5	188.3	189.5	188.3	188.3	188.3	188.3	188.3
177.5°	188.3	188.3	188.3	188.3	188.3	188.3	188.3	188.3	188.3	188.3	188.3
180°	188.3	188.3	188.3	188.3	188.3	188.3	188.3	188.3	188.3	188.3	188.3



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2997.3	2997.3	2997.3	2997.3	2997.3	2997.3
2.5°	2974.0	2986.5	2986.5	2979.1	3014.5	2981.0
5°	2943.7	2972.4	2959.1	2958.8	3003.2	2970.1
7.5°	2922.4	2949.3	2936.9	2934.4	2978.1	2951.6
10°	2900.5	2920.4	2911.5	2918.2	2958.3	2931.7
12.5°	2869.8	2893.2	2884.5	2894.6	2931.2	2910.0
15°	2816.9	2836.8	2841.1	2845.8	2888.2	2866.2
17.5°	2729.4	2739.2	2761.2	2792.4	2836.7	2811.9
20°	2660.7	2674.0	2687.3	2741.8	2793.2	2766.7
22.5°	2582.6	2578.2	2609.1	2673.1	2737.3	2714.2
25°	2371.8	2201.6	2389.4	2554.2	2640.0	2633.3
27.5°	1651.5	1433.1	1626.2	2357.6	2537.8	2551.1
30°	1299.7	1198.0	1297.4	2104.4	2462.3	2493.1
32.5°	1153.9	1084.1	1144.7	1601.7	2367.0	2426.2
35°	995.7	947.1	995.7	1198.0	2179.9	2316.9
37.5°	797.0	697.5	795.3	1035.2	1762.2	2198.9
40°	593.9	467.9	576.2	926.7	1408.3	2106.7
42.5°	395.7	301.5	374.4	729.7	1218.1	1983.7
45°	214.1	187.6	205.3	440.8	994.1	1767.6
47.5°	167.9	177.6	167.9	278.1	760.4	1400.1
50°	161.2	192.2	161.2	214.8	629.1	1060.2
52.5°	175.7	208.4	173.9	169.6	513.4	785.2
55°	199.2	307.4	201.4	137.9	376.4	529.0
57.5°	283.5	345.9	286.6	130.6	290.0	335.4
60°	291.2	372.9	289.0	137.9	224.3	248.7
62.5°	344.4	461.6	344.0	157.8	166.8	205.2
65°	441.8	486.0	446.2	201.1	119.1	185.3
67.5°	419.3	450.7	414.9	215.6	81.9	167.2
70°	412.0	436.2	407.5	246.4	76.1	140.2
72.5°	384.3	387.4	376.4	228.3	68.4	116.7
75°	297.9	278.1	286.9	196.6	68.5	99.4
77.5°	185.2	177.3	178.5	150.1	60.5	74.6
80°	140.1	135.7	133.4	126.6	56.5	56.5
82.5°	103.8	99.4	97.2	97.7	47.4	43.8
85°	47.3	43.0	40.8	56.5	33.7	24.8
87.5°	9.8	9.8	7.9	9.8	12.8	9.1
90°	3.5	3.5	3.5	3.5	1.2	0.0
92.5°	14.5	11.8	14.5	44.2	12.9	3.7
95°	51.6	33.6	51.6	139.8	30.8	10.4
97.5°	144.2	90.8	144.2	231.6	40.0	19.0
100°	244.3	162.9	244.3	261.2	44.6	25.4
102.5°	348.8	273.9	348.8	255.6	50.2	31.9
105°	445.5	425.3	445.5	233.4	58.5	41.6
107.5°	453.0	475.4	453.0	212.1	67.1	51.3
110°	442.4	486.4	442.4	201.0	73.5	57.8



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	423.3	479.1	423.3	195.6	79.1	64.2
115°	390.9	457.5	390.9	189.5	87.5	74.0
117.5°	360.0	428.2	360.0	186.9	95.8	83.4
120°	342.4	407.9	342.4	186.0	101.4	88.9
122.5°	327.5	387.5	327.5	186.9	107.0	94.5
125°	307.4	360.5	307.4	187.2	114.1	102.8
127.5°	292.4	337.6	292.4	187.2	121.1	109.5
130°	284.0	324.7	284.0	187.2	125.6	113.3
132.5°	276.5	314.5	276.5	186.2	130.3	117.8
135°	265.4	298.1	265.4	186.0	137.2	123.6
137.5°	254.2	284.0	254.2	186.0	142.8	130.3
140°	246.7	273.9	246.7	186.0	146.5	134.0
142.5°	239.3	263.6	239.3	186.0	150.2	138.7
145°	229.2	249.6	229.2	186.0	155.7	144.4
147.5°	219.9	236.0	219.9	187.2	161.1	151.4
150°	215.2	227.6	215.2	187.2	163.9	155.9
152.5°	210.6	221.2	210.6	187.2	166.7	159.7
155°	205.8	212.6	205.8	187.2	170.8	165.3
157.5°	201.6	205.9	201.6	187.2	175.0	170.7
160°	198.8	202.2	198.8	187.2	177.8	174.5
162.5°	197.0	199.4	197.0	187.2	179.7	177.3
165°	194.2	196.4	194.2	188.3	182.5	181.5
167.5°	192.5	193.7	192.5	187.2	184.1	183.9
170°	190.7	191.8	190.7	187.2	186.0	184.8
172.5°	189.7	190.0	189.7	188.1	186.9	186.7
175°	189.5	188.3	189.5	188.3	188.3	188.3
177.5°	188.3	188.3	188.3	188.3	188.3	188.3
180°	188.3	188.3	188.3	188.3	188.3	188.3



TEST NUMBER: P855463

CATALOG NUMBER: SQ2-FA-025U-100D-840-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	16.85	16.54	17.54	18.33	14.71	15.71	15.39	16.39	17.19
	3H	16.56	17.46	17.26	18.15	18.98	20.87	21.76	21.57	22.46	23.29
	4H	16.98	17.82	17.69	18.52	19.37	22.15	22.99	22.87	23.70	24.54
	6H	17.34	18.11	18.07	18.83	19.69	22.76	23.54	23.49	24.26	25.11
	8H	17.46	18.19	18.20	18.93	19.79	22.89	23.63	23.63	24.36	25.22
	12H	17.53	18.24	18.28	18.96	19.85	22.94	23.64	23.68	24.37	25.25
4H	2H	16.26	17.10	16.98	17.81	18.65	15.26	16.10	15.98	16.80	17.65
	3H	17.27	17.97	18.00	18.71	19.57	21.59	22.29	22.32	23.03	23.89
	4H	17.83	18.47	18.58	19.21	20.11	23.04	23.68	23.79	24.43	25.32
	6H	18.32	18.86	19.08	19.63	20.54	23.79	24.34	24.55	25.11	26.01
	8H	18.49	19.00	19.26	19.77	20.68	23.96	24.47	24.73	25.24	26.15
	12H	18.61	19.07	19.40	19.86	20.77	24.03	24.48	24.81	25.27	26.19
8H	4H	18.94	19.45	19.71	20.22	21.13	23.18	23.69	23.94	24.45	25.36
	6H	19.55	19.98	20.35	20.78	21.70	24.06	24.48	24.86	25.29	26.20
	8H	19.79	20.16	20.60	20.97	21.90	24.31	24.68	25.12	25.49	26.42
	12H	19.97	20.30	20.78	21.09	22.08	24.44	24.77	25.25	25.56	26.55
12H	4H	19.09	19.55	19.88	20.34	21.25	23.15	23.60	23.93	24.39	25.31
	6H	19.83	20.20	20.64	21.01	21.94	24.07	24.44	24.88	25.25	26.18
	8H	20.14	20.46	20.94	21.26	22.25	24.36	24.68	25.17	25.48	26.47