

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: P853806

Luminaire Tested: SQ2-FA-125U-100D-930-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853806
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-13, G2-2308-131-11)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-FA-125U-100D-930-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT
UPLIGHT 1250 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

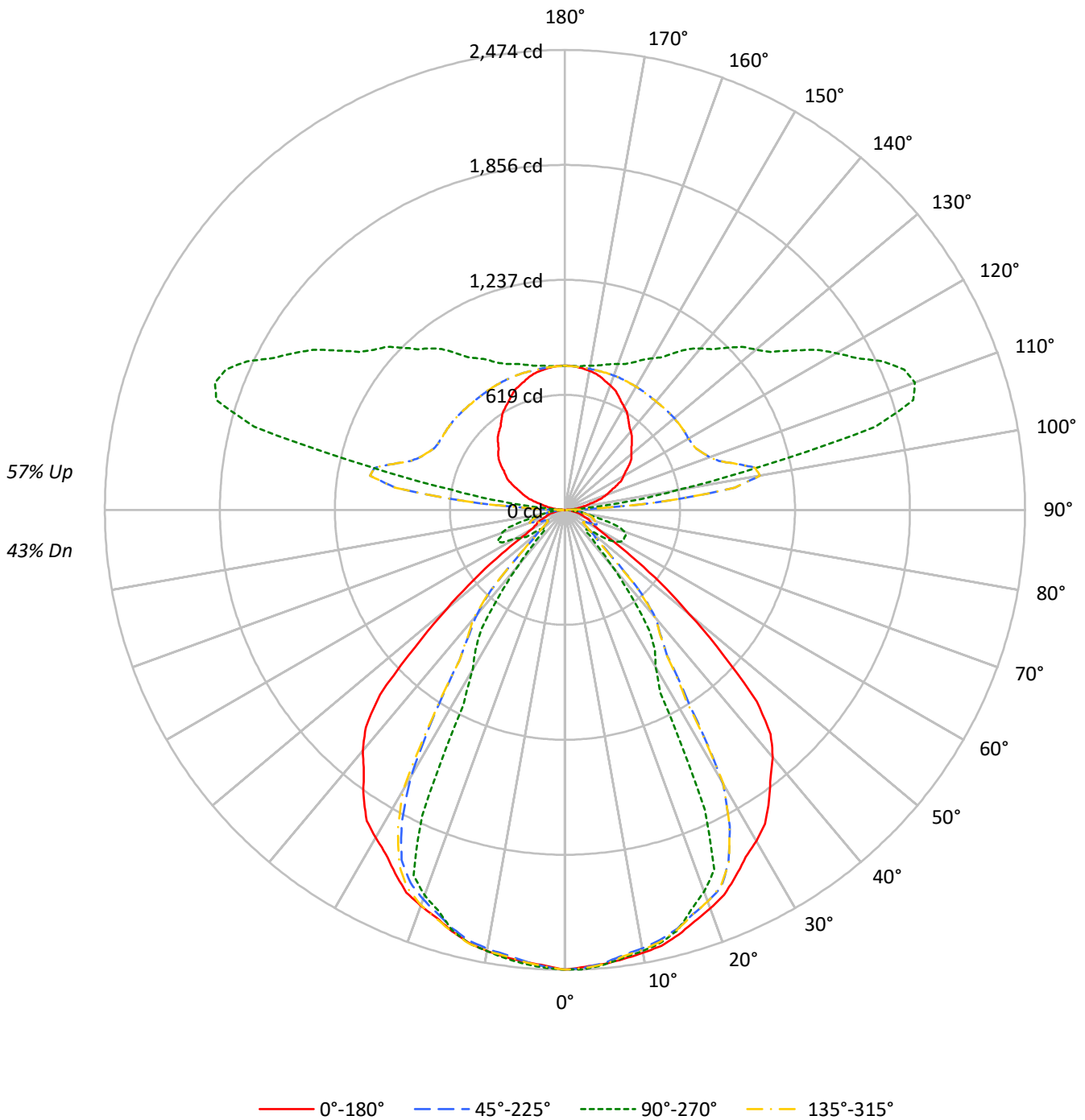
Lumens per Lamp: N/A
Luminaire Lumens: 8393.6 lumens
Efficiency: N/A
Efficacy: 103.0 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 81.5
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	105	105	105	105	96	96	96	96	79	79	79	64	64	64	50	50	50	43				
1	97	93	90	87	89	85	82	80	71	69	67	58	56	55	45	44	44	38				
2	89	83	77	72	82	76	71	67	63	60	57	52	50	48	41	40	39	34				
3	82	74	67	62	75	68	62	58	57	53	50	47	44	42	38	36	34	30				
4	76	66	59	54	70	61	55	50	52	47	44	43	40	37	35	33	31	27				
5	70	60	52	47	64	55	49	44	47	42	39	39	36	33	32	30	28	25				
6	65	54	47	41	60	50	44	39	43	38	34	36	33	30	30	27	25	22				
7	61	49	42	37	56	46	40	35	39	35	31	33	30	27	28	25	23	20				
8	57	45	38	33	52	42	36	31	36	31	28	31	27	25	26	23	21	19				
9	53	42	35	30	49	39	33	29	34	29	25	29	25	23	24	21	20	17				
10	50	38	32	27	46	36	30	26	31	27	23	27	23	21	23	20	18	16				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	39938	39938	39938	39938
5°	39728	39789	39577	39759
10°	39667	39515	39515	39515
15°	39539	39134	39228	39134
20°	39232	37565	38943	37917
25°	38717	31705	38450	32370
30°	38361	18189	37943	18433
35°	37688	15626	37211	15406
40°	36644	8218	35622	8140
45°	33310	3535	32118	3535
50°	21976	4265	20851	3984
55°	12287	7876	11657	7142
60°	6626	11083	6507	9939
65°	5845	13471	6128	15324
70°	5462	16117	5198	16995
75°	5122	13849	5234	14317
80°	4333	9884	4333	10404
85°	3798	5521	3464	6558

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 33310 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.8	2.8
10°-20°	660.4	7.9
20°-30°	900.4	10.7
30°-40°	756.7	9.0
40°-50°	429.8	5.1
50°-60°	228.0	2.7
60°-70°	210.0	2.5
70°-80°	154.1	1.8
80°-90°	41.1	0.5
90°-100°	296.4	3.5
100°-110°	964.9	11.5
110°-120°	954.5	11.4
120°-130°	780.0	9.3
130°-140°	637.5	7.6
140°-150°	496.5	5.9
150°-160°	357.9	4.3
160°-170°	218.8	2.6
170°-180°	73.8	0.9
0°-30°	1793.6	21.4
0°-40°	2550.3	30.4
0°-60°	3208.1	38.2
0°-90°	3613.3	43.0
90°-120°	2215.8	26.4
90°-150°	4129.8	49.2
90°-180°	4780.0	56.9
0°-180°	8393.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2474	2474	2474	2474	2474	
5°	2451	2455	2442	2453	2451	233
15°	2365	2341	2347	2341	2365	667
25°	2173	1780	2158	1817	2173	1002
35°	1912	793	1888	782	1912	1194
45°	1459	155	1407	155	1459	1067
55°	436	280	414	254	436	420
65°	153	353	160	401	153	154
75°	82	222	84	230	82	85
85°	20	30	19	35	20	23
90°	0	6	0	6	0	3
95°	40	119	40	119	40	47
105°	164	1729	164	1729	164	175
115°	303	1888	303	1888	303	300
125°	421	1493	421	1493	421	375
135°	509	1233	509	1233	509	393
145°	595	1031	595	1031	595	372
155°	678	875	678	875	678	313
165°	740	807	740	807	740	209
175°	772	776	772	776	772	73
180°	775	775	775	775	775	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2473.6	2473.6	2473.6	2473.6	2473.6	2473.6	2473.6	2473.6	2473.6	2473.6	2473.6
2.5°	2460.2	2496.7	2464.7	2460.5	2473.6	2470.7	2466.1	2483.4	2454.2	2483.4	2460.2
5°	2451.2	2493.2	2445.6	2433.1	2455.0	2440.4	2453.1	2478.4	2441.9	2474.7	2438.2
7.5°	2435.9	2473.1	2416.2	2408.1	2429.6	2416.8	2422.1	2457.2	2426.6	2448.1	2415.0
10°	2419.5	2452.3	2395.3	2390.1	2410.2	2397.4	2402.7	2439.4	2410.2	2430.2	2397.1
12.5°	2401.6	2427.1	2369.9	2367.7	2384.8	2376.4	2378.8	2409.7	2386.3	2406.4	2374.7
15°	2365.4	2389.1	2331.8	2322.9	2341.2	2333.9	2337.4	2365.0	2346.8	2359.5	2331.8
17.5°	2320.6	2339.6	2282.6	2255.7	2256.5	2265.6	2282.6	2315.8	2299.4	2316.2	2277.0
20°	2283.3	2305.2	2242.3	2190.0	2186.3	2195.4	2242.3	2275.7	2266.5	2284.8	2229.2
22.5°	2240.1	2254.6	2197.5	2109.2	2096.8	2105.9	2191.6	2231.0	2227.7	2240.1	2171.0
25°	2173.3	2187.9	2083.7	1956.6	1779.7	1945.6	2087.5	2158.3	2158.3	2169.3	2078.1
27.5°	2105.4	2105.7	1917.3	1256.6	1108.5	1211.3	1914.7	2068.5	2086.0	2080.5	1901.3
30°	2057.6	2044.8	1699.4	1015.8	975.6	1001.2	1701.3	2006.0	2035.2	2015.2	1656.5
32.5°	2002.4	1966.3	1254.7	933.9	901.0	923.6	1213.3	1931.9	1983.0	1939.6	1302.8
35°	1912.1	1817.3	957.0	825.7	792.8	822.0	949.5	1785.7	1887.9	1771.1	988.7
37.5°	1814.7	1444.5	842.4	657.6	586.9	643.4	838.3	1429.0	1775.2	1395.8	841.7
40°	1738.6	1134.9	757.4	481.1	389.9	453.7	751.8	1082.7	1690.1	1164.8	738.7
42.5°	1637.1	996.9	608.1	305.5	239.2	279.6	583.1	973.9	1585.6	1009.3	588.0
45°	1458.8	856.9	360.0	167.6	154.8	162.1	332.1	841.1	1406.6	822.9	367.5
47.5°	1155.5	653.5	231.3	142.5	156.3	142.5	224.2	632.7	1091.3	631.6	230.9
50°	874.9	510.1	179.1	144.2	169.8	144.2	173.5	492.7	830.1	538.3	177.2
52.5°	648.1	426.3	146.3	158.1	204.1	161.0	142.1	415.0	615.2	434.3	138.4
55°	436.5	334.4	117.5	208.7	279.8	214.2	117.5	324.8	414.1	321.1	113.8
57.5°	276.8	248.7	119.0	268.3	319.4	273.4	120.9	239.7	265.6	240.8	104.5
60°	205.2	196.1	132.4	284.9	343.2	288.5	134.3	188.7	201.5	186.9	111.9
62.5°	169.4	154.4	159.3	308.5	356.7	300.5	162.7	147.3	176.1	141.1	123.9
65°	153.0	100.1	188.4	312.4	352.6	312.4	190.3	94.8	160.4	102.1	167.9
67.5°	138.0	74.2	182.1	310.3	354.8	311.0	177.6	70.8	132.4	69.0	171.6
70°	115.7	66.4	171.6	315.8	341.4	304.9	171.6	64.5	110.1	62.6	201.5
72.5°	96.3	63.1	159.7	291.6	302.6	280.7	161.2	62.7	96.6	56.5	189.5
75°	82.1	62.0	153.0	232.9	222.0	222.0	149.2	60.2	83.9	56.6	147.4
77.5°	61.6	55.0	126.9	152.0	143.6	143.6	124.6	53.1	58.6	49.8	119.8
80°	46.6	50.3	104.5	111.8	106.3	106.3	100.7	48.5	46.6	46.6	98.9
82.5°	36.2	42.8	80.6	82.0	78.0	76.5	78.3	42.4	36.2	39.1	76.5
85°	20.5	29.6	42.9	35.3	29.8	28.0	41.0	27.8	18.7	27.8	41.0
87.5°	7.5	13.9	7.3	7.1	7.1	7.1	7.3	13.9	7.5	12.4	8.8
90°	0.0	2.8	6.7	5.7	5.7	5.7	6.7	2.8	0.0	2.8	6.7
92.5°	13.7	49.3	157.6	52.0	40.0	52.0	157.6	49.3	13.7	49.3	157.6
95°	40.0	122.0	543.2	193.7	119.1	193.7	543.2	122.0	40.0	122.0	543.2
97.5°	75.3	158.8	921.9	561.5	342.7	561.5	921.9	158.8	75.3	158.8	921.9
100°	98.2	180.2	1064.5	949.2	615.6	949.2	1064.5	180.2	98.2	180.2	1064.5
102.5°	124.1	203.1	1047.0	1404.3	1067.7	1404.3	1047.0	203.1	124.1	203.1	1047.0
105°	163.9	236.6	955.9	1825.6	1728.7	1825.6	955.9	236.6	163.9	236.6	955.9
107.5°	207.0	275.4	869.3	1862.2	1964.9	1862.2	869.3	275.4	207.0	275.4	869.3
110°	238.2	300.7	828.2	1816.8	2002.2	1816.8	828.2	300.7	238.2	300.7	828.2



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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°	264.2	325.9	802.2	1734.9	1974.0	1734.9	802.2	325.9	264.2	325.9	802.2
115°	303.1	361.8	778.6	1604.6	1887.9	1604.6	778.6	361.8	303.1	361.8	778.6
117.5°	343.1	396.0	769.4	1485.3	1767.2	1485.3	769.4	396.0	343.1	396.0	769.4
120°	365.9	418.1	767.2	1411.9	1684.9	1411.9	767.2	418.1	365.9	418.1	767.2
122.5°	388.1	439.5	767.9	1348.2	1602.6	1348.2	767.9	439.5	388.1	439.5	767.9
125°	421.2	469.7	768.1	1266.9	1493.3	1266.9	768.1	469.7	421.2	469.7	768.1
127.5°	449.6	499.2	767.9	1206.0	1394.8	1206.0	767.9	499.2	449.6	499.2	767.9
130°	467.9	518.2	767.2	1171.3	1339.9	1171.3	767.2	518.2	467.9	518.2	767.2
132.5°	483.9	536.5	766.4	1139.0	1297.2	1139.0	766.4	536.5	483.9	536.5	766.4
135°	508.9	562.0	764.3	1093.4	1233.2	1093.4	764.3	562.0	508.9	562.0	764.3
137.5°	533.3	586.8	762.2	1047.1	1171.2	1047.1	762.2	586.8	533.3	586.8	762.2
140°	550.8	602.1	761.4	1015.7	1133.1	1015.7	761.4	602.1	550.8	602.1	761.4
142.5°	567.6	616.6	761.4	985.7	1090.4	985.7	761.4	616.6	567.6	616.6	761.4
145°	594.7	638.5	762.4	941.7	1031.1	941.7	762.4	638.5	594.7	638.5	762.4
147.5°	621.0	659.0	763.7	904.2	973.4	904.2	763.7	659.0	621.0	659.0	763.7
150°	638.5	672.1	765.3	881.9	940.6	881.9	765.3	672.1	638.5	672.1	765.3
152.5°	656.0	683.6	766.0	864.9	911.6	864.9	766.0	683.6	656.0	683.6	766.0
155°	678.5	700.9	767.2	843.2	874.8	843.2	767.2	700.9	678.5	700.9	767.2
157.5°	699.9	715.9	768.3	827.1	849.3	827.1	768.3	715.9	699.9	715.9	768.3
160°	712.8	725.9	769.1	817.1	834.8	817.1	769.1	725.9	712.8	725.9	769.1
162.5°	724.3	734.3	769.1	808.6	821.9	808.6	769.1	734.3	724.3	734.3	769.1
165°	740.5	747.0	769.1	797.9	807.2	797.9	769.1	747.0	740.5	747.0	769.1
167.5°	751.9	756.0	769.3	789.8	794.6	789.8	769.3	756.0	751.9	756.0	769.3
170°	759.5	761.4	770.0	784.4	786.2	784.4	770.0	761.4	759.5	761.4	770.0
172.5°	764.9	766.0	771.5	781.3	780.9	781.3	771.5	766.0	764.9	766.0	771.5
175°	771.9	771.9	771.9	777.6	775.7	777.6	771.9	771.9	771.9	771.9	771.9
177.5°	774.8	774.0	773.3	777.0	774.0	777.0	773.3	774.0	774.8	774.0	773.3
180°	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2473.6	2473.6	2473.6	2473.6	2473.6	2473.6
2.5°	2454.4	2464.7	2464.7	2458.7	2487.9	2460.2
5°	2429.4	2453.1	2442.1	2441.9	2478.6	2451.2
7.5°	2411.8	2434.1	2423.8	2421.8	2457.8	2435.9
10°	2393.8	2410.2	2402.9	2408.3	2441.4	2419.5
12.5°	2368.5	2387.8	2380.5	2388.9	2419.1	2401.6
15°	2324.7	2341.2	2344.8	2348.6	2383.7	2365.4
17.5°	2252.5	2260.6	2278.8	2304.6	2341.1	2320.6
20°	2195.9	2206.8	2217.8	2262.8	2305.2	2283.3
22.5°	2131.4	2127.8	2153.3	2206.1	2259.0	2240.1
25°	1957.4	1817.0	1972.0	2108.0	2178.7	2173.3
27.5°	1362.9	1182.7	1342.1	1945.7	2094.4	2105.4
30°	1072.6	988.7	1070.8	1736.8	2032.1	2057.6
32.5°	952.3	894.7	944.7	1321.9	1953.5	2002.4
35°	821.8	781.6	821.8	988.7	1799.0	1912.1
37.5°	657.8	575.7	656.3	854.4	1454.3	1814.7
40°	490.1	386.2	475.5	764.8	1162.2	1738.6
42.5°	326.6	248.9	309.0	602.2	1005.3	1637.1
45°	176.7	154.8	169.4	363.8	820.4	1458.8
47.5°	138.6	146.6	138.6	229.5	627.6	1155.5
50°	133.0	158.6	133.0	177.2	519.2	874.9
52.5°	145.0	172.0	143.5	139.9	423.7	648.1
55°	164.3	253.7	166.2	113.8	310.7	436.5
57.5°	234.0	285.4	236.5	107.8	239.3	276.8
60°	240.3	307.8	238.5	113.8	185.1	205.2
62.5°	284.3	380.9	283.9	130.2	137.6	169.4
65°	364.6	401.1	368.2	166.0	98.2	153.0
67.5°	346.1	372.0	342.4	178.0	67.6	138.0
70°	340.0	360.0	336.3	203.3	62.8	115.7
72.5°	317.2	319.7	310.6	188.4	56.5	96.3
75°	245.9	229.5	236.7	162.3	56.5	82.1
77.5°	152.8	146.3	147.3	123.9	49.9	61.6
80°	115.6	111.9	110.1	104.5	46.6	46.6
82.5°	85.7	82.1	80.3	80.6	39.1	36.2
85°	39.1	35.4	33.6	46.6	27.8	20.5
87.5°	8.6	8.6	7.1	8.8	10.9	7.5
90°	5.7	5.7	5.7	6.7	2.8	0.0
92.5°	52.0	40.0	52.0	157.6	49.3	13.7
95°	193.7	119.1	193.7	543.2	122.0	40.0
97.5°	561.5	342.7	561.5	921.9	158.8	75.3
100°	949.2	615.6	949.2	1064.5	180.2	98.2
102.5°	1404.3	1067.7	1404.3	1047.0	203.1	124.1
105°	1825.6	1728.7	1825.6	955.9	236.6	163.9
107.5°	1862.2	1964.9	1862.2	869.3	275.4	207.0
110°	1816.8	2002.2	1816.8	828.2	300.7	238.2



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CATALOG NUMBER: SQ2-FA-125U-100D-930-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	1734.9	1974.0	1734.9	802.2	325.9	264.2
115°	1604.6	1887.9	1604.6	778.6	361.8	303.1
117.5°	1485.3	1767.2	1485.3	769.4	396.0	343.1
120°	1411.9	1684.9	1411.9	767.2	418.1	365.9
122.5°	1348.2	1602.6	1348.2	767.9	439.5	388.1
125°	1266.9	1493.3	1266.9	768.1	469.7	421.2
127.5°	1206.0	1394.8	1206.0	767.9	499.2	449.6
130°	1171.3	1339.9	1171.3	767.2	518.2	467.9
132.5°	1139.0	1297.2	1139.0	766.4	536.5	483.9
135°	1093.4	1233.2	1093.4	764.3	562.0	508.9
137.5°	1047.1	1171.2	1047.1	762.2	586.8	533.3
140°	1015.7	1133.1	1015.7	761.4	602.1	550.8
142.5°	985.7	1090.4	985.7	761.4	616.6	567.6
145°	941.7	1031.1	941.7	762.4	638.5	594.7
147.5°	904.2	973.4	904.2	763.7	659.0	621.0
150°	881.9	940.6	881.9	765.3	672.1	638.5
152.5°	864.9	911.6	864.9	766.0	683.6	656.0
155°	843.2	874.8	843.2	767.2	700.9	678.5
157.5°	827.1	849.3	827.1	768.3	715.9	699.9
160°	817.1	834.8	817.1	769.1	725.9	712.8
162.5°	808.6	821.9	808.6	769.1	734.3	724.3
165°	797.9	807.2	797.9	769.1	747.0	740.5
167.5°	789.8	794.6	789.8	769.3	756.0	751.9
170°	784.4	786.2	784.4	770.0	761.4	759.5
172.5°	781.3	780.9	781.3	771.5	766.0	764.9
175°	777.6	775.7	777.6	771.9	771.9	771.9
177.5°	777.0	774.0	777.0	773.3	774.0	774.8
180°	774.8	774.8	774.8	774.8	774.8	774.8

TEST NUMBER: P853806

CATALOG NUMBER: SQ2-FA-125U-100D-930-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	12.03	12.75	13.06	13.77	15.15	10.88	11.60	11.92	12.63	14.01
	3H	12.72	13.37	13.77	14.40	15.80	17.03	17.67	18.07	18.71	20.10
	4H	13.13	13.74	14.18	14.78	16.18	18.30	18.91	19.36	19.95	21.35
	6H	13.48	14.04	14.54	15.08	16.49	18.90	19.46	19.97	20.51	21.92
	8H	13.59	14.12	14.66	15.18	16.59	19.02	19.56	20.09	20.61	22.02
	12H	13.66	14.17	14.73	15.22	16.65	19.06	19.57	20.13	20.62	22.05
4H	2H	12.41	13.02	13.47	14.06	15.46	11.41	12.02	12.47	13.05	14.46
	3H	13.40	13.91	14.47	14.98	16.39	17.72	18.23	18.79	19.30	20.71
	4H	13.96	14.43	15.03	15.48	16.92	19.17	19.64	20.24	20.70	22.13
	6H	14.43	14.83	15.51	15.91	17.34	19.90	20.30	20.99	21.38	22.82
	8H	14.60	14.97	15.68	16.05	17.49	20.07	20.44	21.15	21.52	22.96
	12H	14.71	15.05	15.81	16.13	17.58	20.13	20.46	21.22	21.55	23.00
8H	4H	15.06	15.43	16.14	16.50	17.95	19.29	19.66	20.37	20.74	22.18
	6H	15.66	15.97	16.76	17.08	18.52	20.17	20.47	21.27	21.59	23.03
	8H	15.90	16.16	17.01	17.26	18.72	20.42	20.68	21.53	21.78	23.24
	12H	16.06	16.30	17.17	17.39	18.89	20.53	20.77	21.64	21.86	23.36
12H	4H	15.20	15.53	16.29	16.62	18.07	19.25	19.58	20.34	20.67	22.12
	6H	15.94	16.20	17.05	17.30	18.76	20.18	20.44	21.29	21.54	23.00
	8H	16.23	16.47	17.34	17.56	19.06	20.45	20.69	21.56	21.78	23.28