

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: P853805

Luminaire Tested: SQ2-FA-125U-075D-940-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P853805  
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-075D-940-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 750 LUMENS PER FOOT  
UPLIGHT 1250 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

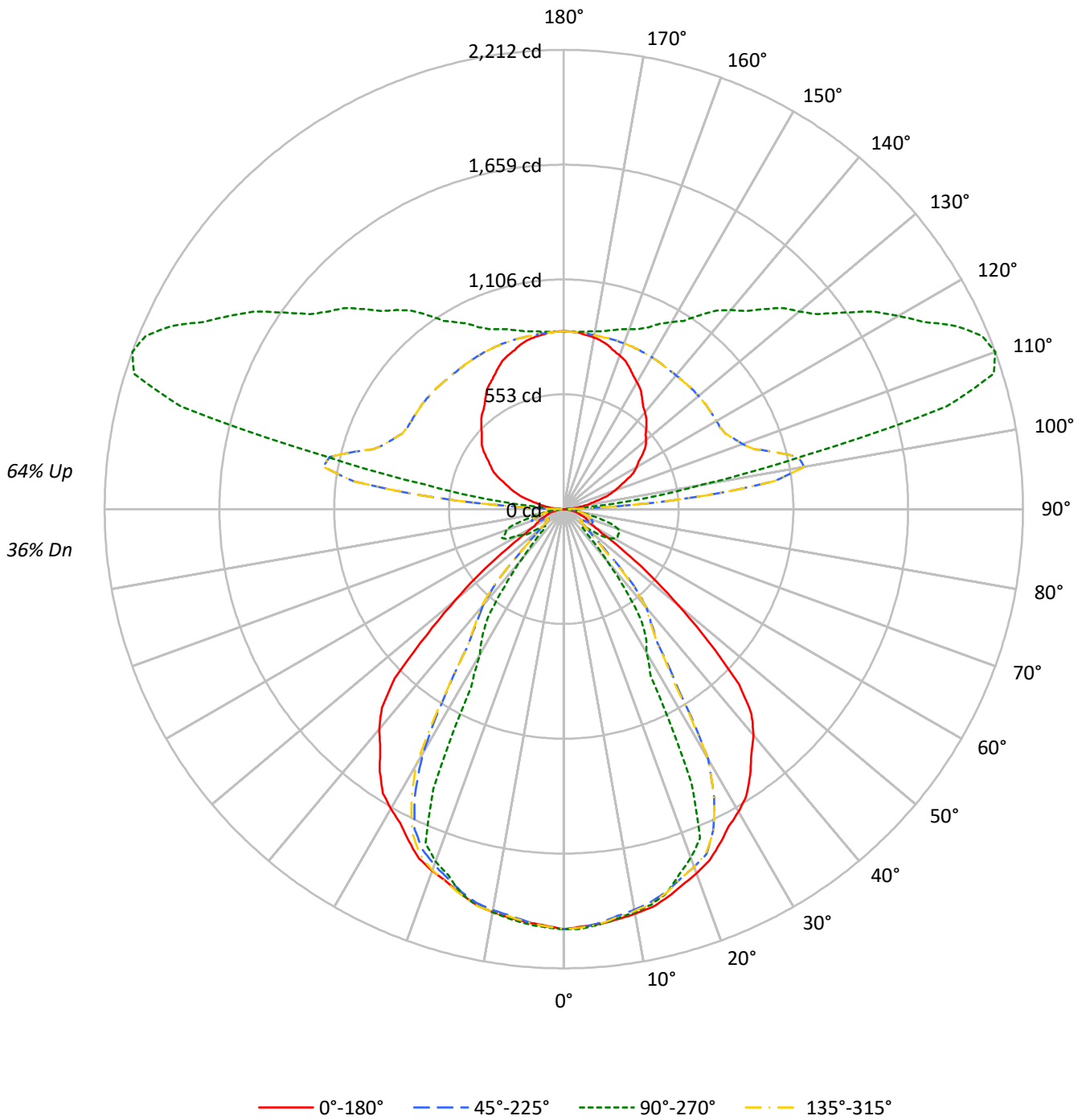
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8236.9 lumens  
Efficiency: N/A  
Efficacy: 116.7 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-Indirect  
  
Input Watts (W): 70.6  
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	104	104	104	104	94	94	94	94	75	75	75	59	59	59	43	43	43	36
1	95	91	88	85	86	83	80	77	67	65	63	53	51	50	39	39	38	32
2	88	81	75	71	79	74	69	65	60	57	54	47	45	43	36	34	33	28
3	81	72	65	60	73	66	60	56	54	50	47	43	40	38	33	31	30	25
4	74	64	57	52	67	59	53	48	49	44	41	39	36	33	30	28	26	23
5	69	58	51	45	62	53	47	42	44	39	36	36	32	30	28	26	24	20
6	64	52	45	40	58	48	42	37	40	35	32	33	29	27	26	23	22	19
7	59	48	40	35	54	44	38	33	37	32	29	30	27	24	24	21	20	17
8	55	44	36	32	50	40	34	30	34	29	26	28	24	22	22	20	18	16
9	51	40	33	28	47	37	31	27	31	27	23	26	22	20	21	18	17	15
10	48	37	30	26	44	34	28	24	29	24	21	24	21	18	19	17	15	14

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	32669	32669	32669	32669
5°	32496	32546	32373	32522
10°	32447	32323	32323	32323
15°	32343	32010	32087	32010
20°	32091	30728	31856	31017
25°	31670	25933	31452	26477
30°	31379	14879	31038	15077
35°	30829	12782	30437	12603
40°	29973	6721	29139	6658
45°	27247	2893	26270	2893
50°	17977	3489	17055	3258
55°	10052	6443	9537	5841
60°	5422	9068	5322	8131
65°	4779	11018	5012	12535
70°	4466	13180	4249	13903
75°	4186	11329	4286	11709
80°	3543	8089	3543	8517
85°	3112	4520	2834	5372

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 27247 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	190.4	2.3
10°-20°	540.2	6.6
20°-30°	736.5	8.9
30°-40°	619.0	7.5
40°-50°	351.6	4.3
50°-60°	186.5	2.3
60°-70°	171.7	2.1
70°-80°	126.1	1.5
80°-90°	33.9	0.4
90°-100°	327.4	4.0
100°-110°	1066.0	12.9
110°-120°	1054.5	12.8
120°-130°	861.7	10.5
130°-140°	704.3	8.6
140°-150°	548.6	6.7
150°-160°	395.4	4.8
160°-170°	241.7	2.9
170°-180°	81.5	1.0
0°-30°	1467.1	17.8
0°-40°	2086.1	25.3
0°-60°	2624.2	31.9
0°-90°	2955.9	35.9
90°-120°	2447.9	29.7
90°-150°	4562.4	55.4
90°-180°	5281.0	64.1
0°-180°	8236.9	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2023	2023	2023	2023	2023	
5°	2005	2008	1997	2007	2005	191
15°	1935	1915	1920	1915	1935	545
25°	1778	1456	1766	1486	1778	820
35°	1564	648	1544	639	1564	976
45°	1193	127	1150	127	1193	872
55°	357	229	339	208	357	344
65°	125	288	131	328	125	126
75°	67	182	69	188	67	69
85°	17	24	15	29	17	19
90°	0	6	0	6	0	3
95°	44	132	44	132	44	51
105°	181	1910	181	1910	181	193
115°	335	2086	335	2086	335	331
125°	465	1650	465	1650	465	414
135°	562	1362	562	1362	562	434
145°	657	1139	657	1139	657	411
155°	750	966	750	966	750	345
165°	818	892	818	892	818	230
175°	853	857	853	857	853	81
180°	856	856	856	856	856	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2023.4	2023.4	2023.4	2023.4	2023.4	2023.4	2023.4	2023.4	2023.4	2023.4	2023.4
2.5°	2012.4	2042.2	2016.0	2012.6	2023.4	2021.0	2017.3	2031.4	2007.5	2031.4	2012.4
5°	2005.0	2039.4	2000.5	1990.2	2008.1	1996.2	2006.6	2027.3	1997.4	2024.3	1994.4
7.5°	1992.5	2023.0	1976.4	1969.7	1987.3	1976.9	1981.2	2010.0	1984.9	2002.5	1975.4
10°	1979.1	2006.0	1959.3	1955.1	1971.5	1961.0	1965.4	1995.3	1971.5	1987.9	1960.8
12.5°	1964.5	1985.3	1938.5	1936.7	1950.7	1943.9	1945.8	1971.0	1951.9	1968.4	1942.5
15°	1934.9	1954.3	1907.4	1900.1	1915.0	1909.1	1912.0	1934.5	1919.6	1930.0	1907.4
17.5°	1898.2	1913.8	1867.1	1845.1	1845.7	1853.2	1867.1	1894.3	1880.8	1894.6	1862.5
20°	1867.7	1885.6	1834.1	1791.4	1788.4	1795.8	1834.1	1861.4	1854.0	1868.9	1823.5
22.5°	1832.3	1844.3	1797.5	1725.3	1715.1	1722.6	1792.6	1824.9	1822.2	1832.4	1775.9
25°	1777.7	1789.6	1704.4	1600.4	1455.7	1591.5	1707.5	1765.5	1765.5	1774.4	1699.9
27.5°	1722.1	1722.4	1568.3	1027.8	906.7	990.8	1566.2	1692.0	1706.3	1701.8	1555.2
30°	1683.1	1672.6	1390.1	830.9	798.1	818.9	1391.6	1640.9	1664.8	1648.4	1355.0
32.5°	1637.9	1608.4	1026.3	763.9	737.0	755.5	992.5	1580.3	1622.0	1586.5	1065.7
35°	1564.1	1486.5	782.8	675.4	648.5	672.4	776.7	1460.7	1544.2	1448.7	808.7
37.5°	1484.4	1181.5	689.1	537.9	480.1	526.3	685.7	1168.9	1452.1	1141.7	688.5
40°	1422.1	928.3	619.5	393.5	318.9	371.1	614.9	885.6	1382.5	952.8	604.3
42.5°	1339.1	815.4	497.4	249.9	195.6	228.7	477.0	796.6	1297.0	825.6	481.0
45°	1193.3	700.9	294.5	137.1	126.7	132.6	271.6	688.0	1150.5	673.1	300.6
47.5°	945.1	534.6	189.2	116.5	127.9	116.5	183.4	517.6	892.7	516.7	188.9
50°	715.7	417.3	146.5	118.0	138.9	118.0	141.9	403.0	679.0	440.3	145.0
52.5°	530.1	348.7	119.6	129.3	166.9	131.7	116.3	339.4	503.2	355.2	113.2
55°	357.1	273.5	96.1	170.7	228.9	175.2	96.1	265.6	338.8	262.7	93.1
57.5°	226.4	203.5	97.4	219.5	261.2	223.6	98.9	196.1	217.3	197.0	85.5
60°	167.9	160.4	108.3	233.0	280.8	236.0	109.9	154.4	164.8	152.9	91.6
62.5°	138.6	126.3	130.3	252.4	291.8	245.8	133.1	120.5	144.0	115.4	101.3
65°	125.1	81.9	154.1	255.6	288.4	255.6	155.6	77.5	131.2	83.5	137.3
67.5°	112.9	60.7	148.9	253.8	290.2	254.4	145.3	57.9	108.3	56.4	140.4
70°	94.6	54.3	140.4	258.4	279.2	249.4	140.4	52.7	90.0	51.2	164.8
72.5°	78.7	51.6	130.6	238.6	247.5	229.6	131.8	51.3	79.0	46.2	155.0
75°	67.1	50.7	125.1	190.5	181.6	181.6	122.1	49.3	68.7	46.3	120.5
77.5°	50.4	45.0	103.8	124.4	117.5	117.5	101.9	43.4	47.9	40.8	98.0
80°	38.1	41.1	85.5	91.5	87.0	87.0	82.4	39.6	38.1	38.1	80.9
82.5°	29.6	35.0	65.9	67.1	63.8	62.6	64.1	34.7	29.6	32.0	62.6
85°	16.8	24.2	35.1	28.9	24.4	22.9	33.6	22.7	15.3	22.7	33.6
87.5°	6.1	11.5	6.4	6.1	6.1	6.1	6.4	11.5	6.1	10.3	7.6
90°	0.0	3.1	7.4	6.3	6.3	6.3	7.4	3.1	0.0	3.1	7.4
92.5°	15.2	54.5	174.1	57.4	44.2	57.4	174.1	54.5	15.2	54.5	174.1
95°	44.2	134.8	600.1	214.0	131.6	214.0	600.1	134.8	44.2	134.8	600.1
97.5°	83.2	175.4	1018.5	620.3	378.6	620.3	1018.5	175.4	83.2	175.4	1018.5
100°	108.4	199.0	1176.0	1048.7	680.1	1048.7	1176.0	199.0	108.4	199.0	1176.0
102.5°	137.1	224.4	1156.6	1551.4	1179.6	1551.4	1156.6	224.4	137.1	224.4	1156.6
105°	181.1	261.4	1056.0	2016.9	1909.8	2016.9	1056.0	261.4	181.1	261.4	1056.0
107.5°	228.7	304.2	960.4	2057.3	2170.7	2057.3	960.4	304.2	228.7	304.2	960.4
110°	263.2	332.2	914.9	2007.1	2212.0	2007.1	914.9	332.2	263.2	332.2	914.9



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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°	291.8	360.0	886.3	1916.7	2180.8	1916.7	886.3	360.0	291.8	360.0	886.3
115°	334.8	399.7	860.2	1772.7	2085.6	1772.7	860.2	399.7	334.8	399.7	860.2
117.5°	379.0	437.5	850.1	1640.9	1952.4	1640.9	850.1	437.5	379.0	437.5	850.1
120°	404.3	461.9	847.5	1559.8	1861.4	1559.8	847.5	461.9	404.3	461.9	847.5
122.5°	428.7	485.5	848.4	1489.4	1770.4	1489.4	848.4	485.5	428.7	485.5	848.4
125°	465.3	518.9	848.6	1399.6	1649.8	1399.6	848.6	518.9	465.3	518.9	848.6
127.5°	496.7	551.5	848.4	1332.4	1540.9	1332.4	848.4	551.5	496.7	551.5	848.4
130°	516.9	572.5	847.5	1293.9	1480.3	1293.9	847.5	572.5	516.9	572.5	847.5
132.5°	534.6	592.7	846.7	1258.3	1433.1	1258.3	846.7	592.7	534.6	592.7	846.7
135°	562.2	620.9	844.4	1207.9	1362.4	1207.9	844.4	620.9	562.2	620.9	844.4
137.5°	589.2	648.3	842.0	1156.8	1293.9	1156.8	842.0	648.3	589.2	648.3	842.0
140°	608.5	665.2	841.2	1122.1	1251.8	1122.1	841.2	665.2	608.5	665.2	841.2
142.5°	627.1	681.2	841.2	1088.9	1204.6	1088.9	841.2	681.2	627.1	681.2	841.2
145°	657.0	705.3	842.3	1040.3	1139.2	1040.3	842.3	705.3	657.0	705.3	842.3
147.5°	686.0	728.0	843.7	999.0	1075.4	999.0	843.7	728.0	686.0	728.0	843.7
150°	705.4	742.5	845.4	974.3	1039.1	974.3	845.4	742.5	705.4	742.5	845.4
152.5°	724.8	755.2	846.3	955.5	1007.1	955.5	846.3	755.2	724.8	755.2	846.3
155°	749.6	774.3	847.5	931.5	966.5	931.5	847.5	774.3	749.6	774.3	847.5
157.5°	773.2	790.9	848.8	913.8	938.3	913.8	848.8	790.9	773.2	790.9	848.8
160°	787.5	801.9	849.6	902.7	922.3	902.7	849.6	801.9	787.5	801.9	849.6
162.5°	800.1	811.3	849.6	893.3	908.0	893.3	849.6	811.3	800.1	811.3	849.6
165°	818.0	825.3	849.6	881.4	891.7	881.4	849.6	825.3	818.0	825.3	849.6
167.5°	830.7	835.2	849.8	872.5	877.8	872.5	849.8	835.2	830.7	835.2	849.8
170°	839.1	841.2	850.7	866.5	868.6	866.5	850.7	841.2	839.1	841.2	850.7
172.5°	845.0	846.2	852.4	863.1	862.7	863.1	852.4	846.2	845.0	846.2	852.4
175°	852.8	852.8	852.8	859.1	857.0	859.1	852.8	852.8	852.8	852.8	852.8
177.5°	855.9	855.1	854.3	858.4	855.1	858.4	854.3	855.1	855.9	855.1	854.3
180°	855.9	855.9	855.9	855.9	855.9	855.9	855.9	855.9	855.9	855.9	855.9



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2023.4	2023.4	2023.4	2023.4	2023.4	2023.4
2.5°	2007.7	2016.0	2016.0	2011.2	2035.1	2012.4
5°	1987.2	2006.6	1997.6	1997.4	2027.4	2005.0
7.5°	1972.8	1991.0	1982.7	1980.9	2010.4	1992.5
10°	1958.0	1971.5	1965.5	1970.0	1997.0	1979.1
12.5°	1937.4	1953.2	1947.2	1954.1	1978.8	1964.5
15°	1901.6	1915.0	1918.0	1921.1	1949.8	1934.9
17.5°	1842.5	1849.1	1864.0	1885.1	1914.9	1898.2
20°	1796.2	1805.2	1814.1	1850.9	1885.6	1867.7
22.5°	1743.4	1740.5	1761.3	1804.5	1847.8	1832.3
25°	1601.1	1486.2	1613.1	1724.3	1782.2	1777.7
27.5°	1114.8	967.4	1097.8	1591.5	1713.2	1722.1
30°	877.4	808.7	875.9	1420.6	1662.2	1683.1
32.5°	779.0	731.8	772.7	1081.3	1597.9	1637.9
35°	672.2	639.4	672.2	808.7	1471.6	1564.1
37.5°	538.0	470.9	536.8	698.9	1189.6	1484.4
40°	400.9	315.9	389.0	625.6	950.7	1422.1
42.5°	267.1	203.6	252.8	492.6	822.3	1339.1
45°	144.6	126.7	138.6	297.6	671.1	1193.3
47.5°	113.4	119.9	113.4	187.7	513.4	945.1
50°	108.8	129.7	108.8	145.0	424.7	715.7
52.5°	118.6	140.7	117.4	114.4	346.6	530.1
55°	134.4	207.5	135.9	93.1	254.1	357.1
57.5°	191.4	233.5	193.5	88.2	195.7	226.4
60°	196.6	251.8	195.1	93.1	151.4	167.9
62.5°	232.5	311.6	232.2	106.5	112.6	138.6
65°	298.2	328.1	301.2	135.8	80.4	125.1
67.5°	283.1	304.3	280.1	145.6	55.3	112.9
70°	278.1	294.5	275.1	166.3	51.3	94.6
72.5°	259.5	261.5	254.1	154.1	46.2	78.7
75°	201.1	187.7	193.7	132.8	46.3	67.1
77.5°	125.0	119.6	120.5	101.3	40.8	50.4
80°	94.5	91.6	90.1	85.5	38.1	38.1
82.5°	70.1	67.1	65.6	65.9	32.0	29.6
85°	32.0	29.0	27.5	38.1	22.8	16.8
87.5°	7.4	7.4	6.2	7.6	9.1	6.1
90°	6.3	6.3	6.3	7.4	3.1	0.0
92.5°	57.4	44.2	57.4	174.1	54.5	15.2
95°	214.0	131.6	214.0	600.1	134.8	44.2
97.5°	620.3	378.6	620.3	1018.5	175.4	83.2
100°	1048.7	680.1	1048.7	1176.0	199.0	108.4
102.5°	1551.4	1179.6	1551.4	1156.6	224.4	137.1
105°	2016.9	1909.8	2016.9	1056.0	261.4	181.1
107.5°	2057.3	2170.7	2057.3	960.4	304.2	228.7
110°	2007.1	2212.0	2007.1	914.9	332.2	263.2





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	1916.7	2180.8	1916.7	886.3	360.0	291.8
115°	1772.7	2085.6	1772.7	860.2	399.7	334.8
117.5°	1640.9	1952.4	1640.9	850.1	437.5	379.0
120°	1559.8	1861.4	1559.8	847.5	461.9	404.3
122.5°	1489.4	1770.4	1489.4	848.4	485.5	428.7
125°	1399.6	1649.8	1399.6	848.6	518.9	465.3
127.5°	1332.4	1540.9	1332.4	848.4	551.5	496.7
130°	1293.9	1480.3	1293.9	847.5	572.5	516.9
132.5°	1258.3	1433.1	1258.3	846.7	592.7	534.6
135°	1207.9	1362.4	1207.9	844.4	620.9	562.2
137.5°	1156.8	1293.9	1156.8	842.0	648.3	589.2
140°	1122.1	1251.8	1122.1	841.2	665.2	608.5
142.5°	1088.9	1204.6	1088.9	841.2	681.2	627.1
145°	1040.3	1139.2	1040.3	842.3	705.3	657.0
147.5°	999.0	1075.4	999.0	843.7	728.0	686.0
150°	974.3	1039.1	974.3	845.4	742.5	705.4
152.5°	955.5	1007.1	955.5	846.3	755.2	724.8
155°	931.5	966.5	931.5	847.5	774.3	749.6
157.5°	913.8	938.3	913.8	848.8	790.9	773.2
160°	902.7	922.3	902.7	849.6	801.9	787.5
162.5°	893.3	908.0	893.3	849.6	811.3	800.1
165°	881.4	891.7	881.4	849.6	825.3	818.0
167.5°	872.5	877.8	872.5	849.8	835.2	830.7
170°	866.5	868.6	866.5	850.7	841.2	839.1
172.5°	863.1	862.7	863.1	852.4	846.2	845.0
175°	859.1	857.0	859.1	852.8	852.8	852.8
177.5°	858.4	855.1	858.4	854.3	855.1	855.9
180°	855.9	855.9	855.9	855.9	855.9	855.9

TEST NUMBER: P853805

CATALOG NUMBER: SQ2-FA-125U-075D-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	10.52	11.20	11.61	12.28	13.74	9.38	10.06	10.47	11.13	12.60
	3H	11.21	11.82	12.31	12.91	14.39	15.52	16.13	16.62	17.21	18.70
	4H	11.62	12.19	12.72	13.28	14.77	16.79	17.37	17.90	18.45	19.94
	6H	11.96	12.50	13.08	13.58	15.08	17.39	17.92	18.51	19.01	20.51
	8H	12.08	12.58	13.19	13.68	15.18	17.51	18.02	18.63	19.12	20.61
	12H	12.15	12.62	13.27	13.72	15.24	17.55	18.03	18.67	19.12	20.64
4H	2H	10.90	11.48	12.01	12.56	14.05	9.90	10.47	11.01	11.56	13.05
	3H	11.89	12.37	13.01	13.48	14.98	16.21	16.69	17.33	17.80	19.31
	4H	12.45	12.89	13.57	13.99	15.51	17.66	18.10	18.78	19.20	20.72
	6H	12.92	13.29	14.04	14.42	15.93	18.39	18.77	19.52	19.89	21.41
	8H	13.09	13.44	14.21	14.55	16.08	18.56	18.91	19.68	20.02	21.55
	12H	13.19	13.51	14.34	14.64	16.18	18.61	18.93	19.75	20.06	21.59
8H	4H	13.54	13.89	14.67	15.01	16.54	17.77	18.13	18.90	19.24	20.77
	6H	14.14	14.43	15.29	15.59	17.12	18.65	18.94	19.80	20.10	21.63
	8H	14.38	14.63	15.53	15.77	17.32	18.90	19.15	20.05	20.29	21.84
	12H	14.54	14.77	15.70	15.90	17.48	19.02	19.24	20.17	20.37	21.96
12H	4H	13.68	14.00	14.82	15.13	16.66	17.73	18.05	18.87	19.18	20.71
	6H	14.42	14.67	15.57	15.81	17.36	18.66	18.91	19.81	20.05	21.60
	8H	14.71	14.93	15.87	16.07	17.65	18.93	19.16	20.09	20.29	21.87