

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



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: P937717

Luminaire Tested: SQ4-FB-100U-125D-840-1D-UNV-STD-W-12

Issue Date: 12/17/2024

**Test Information**

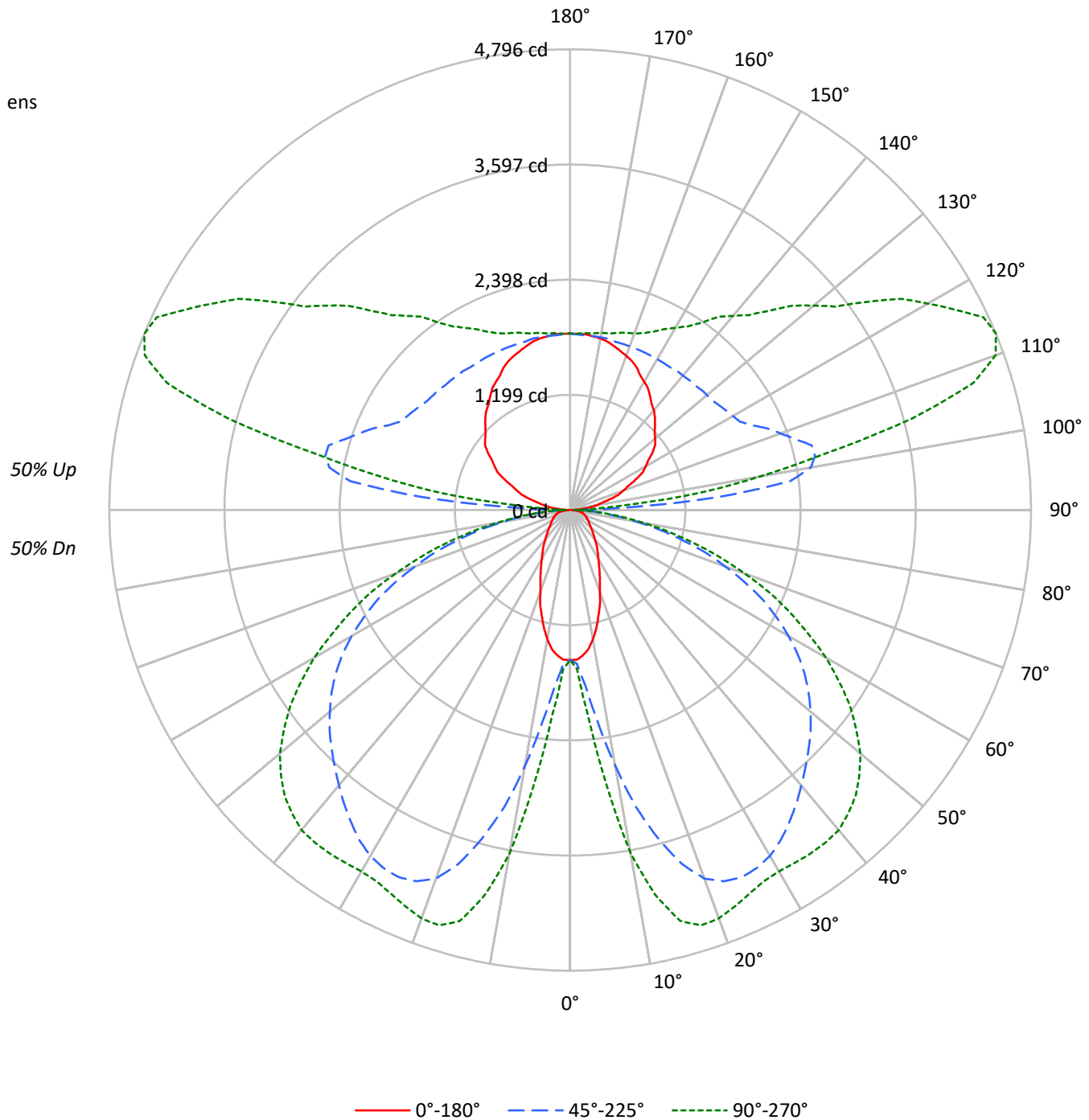
Test Method: LM-79-2019  
Report Number: P937717  
REPORT IS A COMBINATION OF REPORTS P933560 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-100U-125D-840-1D-UNV-STD-W-12  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 23982.7 lumens  
Efficiency: N/A  
Efficacy: 116.2 lumens/watt  
Spacing Criteria (0/90/45): 0.71 / 2.69 / 2.33  
Luminous Opening: Rectangular w/ Sides (W: 0.29' x L: 12' x H: 0.1')  
CIE Type: General Diffuse  
  
Input Watts (W): 206.4  
Input Voltage (V): NR  
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

TEST NUMBER: P937717  
CATALOG NUMBER: SQ4-FB-100U-125D-840-1D-UNV-STD-W-12

### Luminous Intensity Polar Plot





TEST NUMBER: P937717

CATALOG NUMBER: SQ4-FB-100U-125D-840-1D-UNV-STD-W-12

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				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	107	107	107	107	99	99	99	99	84	84	84	69	69	69	56	56	56	56	56	56	50
1	97	93	89	85	90	86	82	79	72	70	67	60	58	57	49	48	47	49	48	47	41
2	88	80	74	68	81	74	69	64	63	59	55	52	49	46	42	40	38	42	40	38	34
3	80	70	62	56	73	65	58	53	55	50	45	46	42	39	37	34	32	37	34	32	28
4	73	62	53	47	67	57	50	44	48	43	38	40	36	32	33	30	27	33	30	27	23
5	67	54	46	40	61	50	43	37	43	37	32	36	31	28	29	26	23	29	26	23	20
6	61	49	40	34	56	45	37	32	38	32	28	32	27	24	26	23	20	26	23	20	17
7	56	44	35	30	52	40	33	28	34	29	24	29	24	21	24	20	17	24	20	17	15
8	52	39	31	26	48	37	29	24	31	25	21	26	22	18	22	18	15	22	18	15	13
9	48	36	28	23	44	33	26	21	28	23	19	24	19	16	20	16	14	20	16	14	11
10	45	33	25	20	41	30	24	19	26	21	17	22	18	15	18	15	12	18	15	12	10

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

	0°	45°	90°
0°	4825	4825	4825
5°	4715	5578	6485
10°	4279	8133	10752
15°	3638	10628	12983
20°	2963	12319	13231
25°	2473	12895	12963
30°	2086	12980	12938
35°	1845	12767	13272
40°	1609	12491	13618
45°	1458	12290	13672
50°	1338	12108	13445
55°	1283	11843	12849
60°	1315	11328	11908
65°	1370	10543	10615
70°	1463	9201	8967
75°	1627	7509	6998
80°	1791	5213	4716
85°	1627	2771	2413

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 13672 cd/sqm



TEST NUMBER: P937717

CATALOG NUMBER: SQ4-FB-100U-125D-840-1D-UNV-STD-W-12

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	201.8	0.8
10°-20°	894.3	3.7
20°-30°	1564.3	6.5
30°-40°	2013.7	8.4
40°-50°	2249.2	9.4
50°-60°	2154.2	9.0
60°-70°	1707.2	7.1
70°-80°	1003.9	4.2
80°-90°	285.9	1.2
90°-100°	895.4	3.7
100°-110°	2354.1	9.8
110°-120°	2441.0	10.2
120°-130°	1958.0	8.2
130°-140°	1536.3	6.4
140°-150°	1179.2	4.9
150°-160°	849.2	3.5
160°-170°	519.6	2.2
170°-180°	175.5	0.7
0°-30°	2660.3	11.1
0°-40°	4674.0	19.5
0°-60°	9077.4	37.8
0°-90°	12074.5	50.3
90°-120°	5690.5	23.7
90°-150°	10364.0	43.2
90°-180°	11908.0	49.7
0°-180°	23982.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1560	1560	1560	1560	1560	
5°	1520	1630	1836	2077	2152	140
15°	1139	2102	3541	4294	4429	317
25°	727	2382	4218	4404	4409	335
35°	492	2277	3972	4198	4364	307
45°	336	1816	3511	4023	4203	260
55°	241	1154	2979	3461	3556	219
65°	191	612	2212	2488	2523	189
75°	140	376	1214	1334	1339	147
85°	50	115	301	331	336	53
90°	12	34	94	47	47	14
95°	118	464	1542	795	541	131
105°	424	642	2603	3951	3686	450
115°	753	915	2085	4158	4746	744
125°	1048	1175	1896	3204	3780	930
135°	1249	1375	1837	2586	2933	966
145°	1449	1541	1814	2207	2379	908
155°	1637	1683	1814	1991	2049	752
165°	1767	1790	1814	1885	1908	499
175°	1837	1837	1826	1849	1849	174
180°	1837	1837	1837	1837	1837	



TEST NUMBER: P937717

CATALOG NUMBER: SQ4-FB-100U-125D-840-1D-UNV-STD-W-12

**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1560.0	1560.0	1560.0	1560.0	1560.0	1560.0	1560.0	1560.0	1560.0	1560.0	1560.0
2.5°	1560.0	1560.0	1569.9	1575.0	1584.9	1590.0	1600.1	1610.0	1640.2	1645.2	1655.2
5°	1519.7	1539.8	1605.0	1630.1	1700.3	1795.7	1835.8	1901.0	2036.4	2076.6	2101.6
7.5°	1459.6	1504.7	1665.3	1705.4	1881.0	2131.7	2237.0	2377.5	2593.2	2698.5	2783.8
10°	1364.3	1459.6	1745.5	1840.7	2126.7	2507.8	2703.5	2899.1	3225.1	3370.6	3425.8
12.5°	1259.0	1414.4	1830.8	1961.2	2372.5	2929.2	3165.0	3380.6	3751.8	3947.5	3977.5
15°	1138.6	1349.2	1911.0	2101.6	2633.3	3280.4	3541.1	3807.0	4153.1	4293.6	4328.6
17.5°	1033.3	1299.1	1986.3	2186.8	2833.9	3596.3	3862.2	4082.8	4363.7	4459.0	4484.1
20°	902.8	1218.8	2036.4	2297.2	3044.6	3827.0	4082.8	4253.3	4444.0	4504.2	4514.2
22.5°	807.5	1133.5	2066.5	2337.3	3185.0	3967.5	4183.2	4318.5	4449.0	4469.0	4474.1
25°	727.3	1038.3	2061.5	2382.5	3305.4	4052.8	4218.3	4318.5	4393.8	4403.8	4403.8
27.5°	652.1	933.0	2041.4	2392.5	3395.7	4072.8	4203.2	4273.4	4308.6	4328.6	4328.6
30°	586.9	832.6	1991.2	2372.5	3435.8	4052.8	4158.1	4193.2	4228.3	4258.4	4273.4
32.5°	536.7	737.3	1916.0	2332.4	3440.8	4002.6	4077.9	4097.9	4148.0	4218.3	4243.4
35°	491.5	642.0	1830.8	2277.1	3410.8	3922.4	3972.5	3992.6	4092.9	4198.2	4233.3
37.5°	446.4	571.8	1720.4	2181.9	3365.6	3827.0	3862.2	3897.3	4052.8	4178.2	4218.3
40°	401.2	511.6	1590.0	2076.6	3295.4	3711.7	3741.8	3797.0	4002.6	4148.0	4188.1
42.5°	366.2	461.5	1449.6	1966.2	3205.1	3581.3	3626.5	3706.7	3942.4	4097.9	4143.1
45°	336.0	411.3	1299.1	1815.7	3089.7	3445.8	3511.1	3621.4	3872.2	4022.6	4062.8
47.5°	306.0	376.2	1143.6	1660.2	2964.3	3310.4	3395.7	3521.0	3776.9	3922.4	3957.4
50°	280.9	341.1	988.1	1494.7	2828.9	3165.0	3265.2	3395.7	3656.5	3791.9	3837.1
52.5°	260.8	311.0	842.7	1329.2	2673.4	3014.5	3129.9	3265.2	3511.1	3641.5	3671.5
55°	240.8	285.9	717.3	1153.6	2512.9	2853.9	2979.4	3109.8	3350.5	3460.9	3480.9
57.5°	230.7	265.9	612.0	988.1	2342.4	2673.4	2813.8	2934.3	3159.9	3245.2	3265.2
60°	215.7	250.8	531.6	847.7	2156.8	2502.9	2623.2	2743.7	2934.3	3004.4	3019.5
62.5°	200.7	240.8	471.5	712.2	1966.2	2302.2	2422.6	2532.9	2693.5	2743.7	2763.7
65°	190.6	230.7	426.3	612.0	1770.6	2091.6	2211.9	2307.3	2437.7	2487.8	2497.9
67.5°	180.6	220.7	391.2	526.7	1575.0	1881.0	1971.2	2061.5	2161.8	2211.9	2217.0
70°	165.5	210.6	361.1	466.4	1374.3	1640.2	1715.4	1810.7	1890.9	1916.0	1931.0
72.5°	155.5	195.6	341.1	421.3	1168.7	1409.5	1479.6	1534.9	1605.0	1630.1	1630.1
75°	140.4	175.6	321.0	376.2	958.0	1153.6	1213.9	1269.0	1324.1	1334.2	1319.2
77.5°	125.4	155.5	275.8	316.0	747.3	912.9	963.0	993.1	1038.3	1048.3	1053.3
80°	105.3	135.5	215.7	245.8	541.7	672.1	707.2	732.3	772.4	772.4	782.5
82.5°	80.2	105.3	155.5	175.6	366.2	461.5	491.5	506.5	531.6	531.6	531.6
85°	50.2	65.2	100.3	115.4	220.7	280.9	300.9	306.0	326.0	331.1	331.1
87.5°	25.1	35.1	65.2	70.2	115.4	145.4	145.4	155.5	155.5	150.5	145.4
90°	12.4	22.2	32.0	34.5	54.2	80.5	93.7	83.3	62.4	46.8	46.8
92.5°	49.3	133.1	217.0	237.9	334.5	463.3	527.7	462.5	332.1	234.3	225.0
95°	118.4	271.8	425.2	463.6	823.1	1302.6	1542.3	1376.3	1044.2	795.1	766.9
97.5°	204.6	340.0	475.3	509.2	1108.7	1908.1	2307.9	2202.9	1993.1	1835.7	1782.1
100°	271.2	393.9	516.6	547.4	1212.7	2099.8	2543.4	2551.1	2566.4	2577.9	2514.0
102.5°	327.9	442.4	556.9	585.6	1260.4	2160.2	2610.0	2743.7	3011.0	3211.6	3156.8
105°	424.1	521.1	618.1	642.3	1295.8	2167.0	2602.6	2902.3	3501.8	3951.3	3921.9
107.5°	522.8	613.2	703.6	726.2	1302.3	2070.5	2454.6	2872.7	3708.9	4335.9	4343.1
110°	589.3	671.0	752.6	773.0	1292.4	1985.0	2331.3	2798.7	3733.5	4434.5	4465.3



TEST NUMBER: P937717

CATALOG NUMBER: SQ4-FB-100U-125D-840-1D-UNV-STD-W-12

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	654.6	732.5	810.3	829.7	1292.9	1910.4	2219.1	2697.5	3654.2	4371.7	4418.8
115°	753.3	825.1	896.8	914.8	1304.8	1824.7	2084.8	2545.6	3467.2	4158.4	4223.7
117.5°	850.7	915.9	981.1	997.4	1329.1	1771.2	1992.3	2408.2	3239.9	3863.8	3936.2
120°	907.4	968.7	1030.2	1045.5	1348.8	1753.2	1955.4	2335.3	3095.3	3665.3	3735.7
122.5°	962.9	1024.9	1086.7	1102.2	1377.2	1743.7	1927.0	2269.1	2953.5	3466.8	3536.2
125°	1048.0	1104.4	1160.8	1174.9	1415.3	1735.9	1896.2	2186.8	2768.2	3204.2	3268.1
127.5°	1116.9	1173.9	1230.9	1245.2	1453.5	1731.4	1870.3	2119.9	2619.0	2993.3	3047.3
130°	1154.0	1215.3	1276.7	1292.0	1481.5	1734.1	1860.4	2082.6	2527.0	2860.3	2910.2
132.5°	1192.2	1253.6	1314.9	1330.2	1504.0	1735.8	1851.7	2050.6	2448.5	2746.8	2791.5
135°	1248.9	1304.8	1360.7	1374.6	1528.7	1734.2	1837.0	2003.6	2336.6	2586.5	2625.0
137.5°	1306.8	1362.2	1417.5	1431.3	1565.7	1744.9	1834.5	1975.3	2257.0	2468.2	2499.7
140°	1354.9	1405.9	1456.8	1469.6	1588.3	1746.7	1825.8	1947.4	2190.8	2373.3	2402.7
142.5°	1391.9	1439.0	1486.1	1497.9	1607.2	1752.9	1825.8	1932.7	2146.4	2306.7	2332.0
145°	1448.6	1489.7	1530.8	1541.1	1631.9	1753.0	1813.6	1900.9	2075.7	2206.8	2226.0
147.5°	1505.3	1545.3	1585.3	1595.3	1668.0	1765.1	1813.6	1882.3	2019.9	2123.0	2138.9
150°	1542.3	1578.4	1614.6	1623.7	1687.0	1771.4	1813.6	1871.7	1987.8	2074.9	2087.7
152.5°	1580.5	1607.9	1635.3	1642.2	1699.3	1775.4	1813.6	1863.2	1962.3	2036.7	2046.3
155°	1637.2	1657.5	1677.8	1682.9	1726.4	1784.5	1813.6	1853.0	1931.8	1991.0	1997.4
157.5°	1679.1	1698.9	1718.6	1723.6	1753.6	1793.6	1813.6	1844.2	1905.6	1951.6	1956.1
160°	1707.5	1722.9	1738.2	1742.0	1765.9	1797.7	1813.6	1839.9	1892.4	1931.8	1934.4
162.5°	1735.8	1747.3	1758.8	1761.7	1779.0	1802.0	1813.6	1835.7	1880.1	1913.4	1915.8
165°	1766.6	1777.0	1787.5	1790.1	1797.9	1808.3	1813.6	1829.5	1861.2	1885.0	1887.6
167.5°	1795.0	1799.9	1804.9	1806.2	1812.7	1821.5	1825.8	1836.3	1857.1	1872.8	1873.8
170°	1813.6	1818.5	1823.5	1824.6	1825.0	1825.5	1825.8	1836.3	1857.1	1872.8	1872.8
172.5°	1823.4	1824.4	1825.5	1825.8	1825.8	1825.8	1825.8	1834.0	1850.5	1862.9	1861.9
175°	1837.0	1837.0	1837.0	1837.0	1833.2	1828.3	1825.8	1831.1	1841.4	1849.2	1849.2
177.5°	1837.0	1837.0	1837.0	1837.0	1834.1	1830.3	1828.3	1832.4	1840.6	1846.8	1845.7
180°	1837.0	1837.0	1837.0	1837.0	1837.0	1837.0	1837.0	1837.0	1837.0	1837.0	1837.0



TEST NUMBER: P937717

CATALOG NUMBER: SQ4-FB-100U-125D-840-1D-UNV-STD-W-12

**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	1560.0	1560.0
2.5°	1665.3	1655.2
5°	2141.8	2151.8
7.5°	2884.1	2879.0
10°	3586.2	3631.4
12.5°	4097.9	4107.9
15°	4408.9	4428.9
17.5°	4529.3	4534.2
20°	4534.2	4524.2
22.5°	4479.1	4469.0
25°	4413.9	4408.9
27.5°	4353.7	4358.8
30°	4328.6	4343.6
32.5°	4328.6	4353.7
35°	4338.6	4363.7
37.5°	4333.7	4363.7
40°	4313.6	4348.7
42.5°	4258.4	4283.5
45°	4173.1	4203.2
47.5°	4062.8	4082.8
50°	3922.4	3942.4
52.5°	3746.8	3751.8
55°	3536.2	3556.2
57.5°	3310.4	3315.4
60°	3059.6	3074.7
62.5°	2793.8	2793.8
65°	2512.9	2523.0
67.5°	2222.0	2247.1
70°	1926.1	1931.0
72.5°	1635.1	1635.1
75°	1334.2	1339.2
77.5°	1048.3	1048.3
80°	777.5	782.5
82.5°	536.7	546.8
85°	336.0	336.0
87.5°	155.5	140.4
90°	46.8	46.8
92.5°	187.6	150.4
95°	654.1	541.2
97.5°	1567.3	1352.5
100°	2258.1	2002.2
102.5°	2937.6	2718.5
105°	3804.0	3686.2
107.5°	4371.6	4400.1
110°	4588.0	4710.8





TEST NUMBER: P937717

CATALOG NUMBER: SQ4-FB-100U-125D-840-1D-UNV-STD-W-12

**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	4607.3	4795.9
115°	4485.1	4746.5
117.5°	4226.1	4516.0
120°	4017.3	4299.0
122.5°	3814.0	4091.8
125°	3524.0	3779.9
127.5°	3263.3	3479.1
130°	3109.5	3309.0
132.5°	2970.1	3148.8
135°	2778.9	2933.0
137.5°	2625.7	2751.8
140°	2520.6	2638.4
142.5°	2433.3	2534.7
145°	2302.7	2379.4
147.5°	2202.4	2266.0
150°	2139.3	2190.8
152.5°	2085.3	2124.2
155°	2023.2	2049.0
157.5°	1974.2	1992.3
160°	1944.9	1955.4
162.5°	1925.7	1935.6
165°	1898.0	1908.4
167.5°	1878.2	1882.5
170°	1872.8	1872.8
172.5°	1858.0	1854.2
175°	1849.2	1849.2
177.5°	1841.3	1837.0
180°	1837.0	1837.0



TEST NUMBER: P937717  
 CATALOG NUMBER: SQ4-FB-100U-125D-840-1D-UNV-STD-W-12

**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	6.51	7.41	7.46	8.38	9.64	19.70	20.60	20.65	21.57	22.84
	3H	7.22	8.03	8.18	9.01	10.29	21.55	22.36	22.51	23.34	24.62
	4H	7.52	8.29	8.49	9.27	10.56	22.20	22.97	23.17	23.95	25.24
	6H	7.77	8.48	8.75	9.47	10.77	22.64	23.35	23.62	24.33	25.64
	8H	7.84	8.52	8.83	9.52	10.83	22.76	23.44	23.75	24.44	25.75
	12H	7.86	8.50	8.85	9.50	10.83	22.83	23.48	23.83	24.48	25.81
4H	2H	13.74	14.51	14.72	15.49	16.78	19.98	20.75	20.96	21.73	23.02
	3H	15.31	15.95	16.30	16.96	18.27	22.04	22.68	23.02	23.69	25.00
	4H	15.41	16.00	16.40	17.00	18.33	22.81	23.40	23.80	24.40	25.73
	6H	15.42	15.93	16.43	16.96	18.28	23.35	23.86	24.36	24.89	26.22
	8H	15.40	15.87	16.41	16.89	18.24	23.52	24.00	24.53	25.02	26.36
	12H	15.36	15.79	16.38	16.82	18.17	23.62	24.05	24.65	25.08	26.43
8H	4H	16.86	17.33	17.87	18.35	19.70	22.87	23.35	23.88	24.37	25.71
	6H	17.10	17.50	18.14	18.56	19.90	23.51	23.90	24.54	24.96	26.31
	8H	17.12	17.47	18.16	18.52	19.88	23.73	24.08	24.77	25.13	26.49
	12H	17.09	17.40	18.14	18.44	19.84	23.88	24.19	24.93	25.23	26.63
12H	4H	17.00	17.44	18.03	18.47	19.82	22.83	23.26	23.86	24.29	25.64
	6H	17.36	17.71	18.40	18.76	20.12	23.49	23.84	24.53	24.89	26.25
	8H	17.43	17.74	18.48	18.78	20.19	23.73	24.03	24.77	25.07	26.48