

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



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P243776

Luminaire Tested: S125RDRP-H1090D835-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243776
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-71)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125RDRP-H1090D835-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

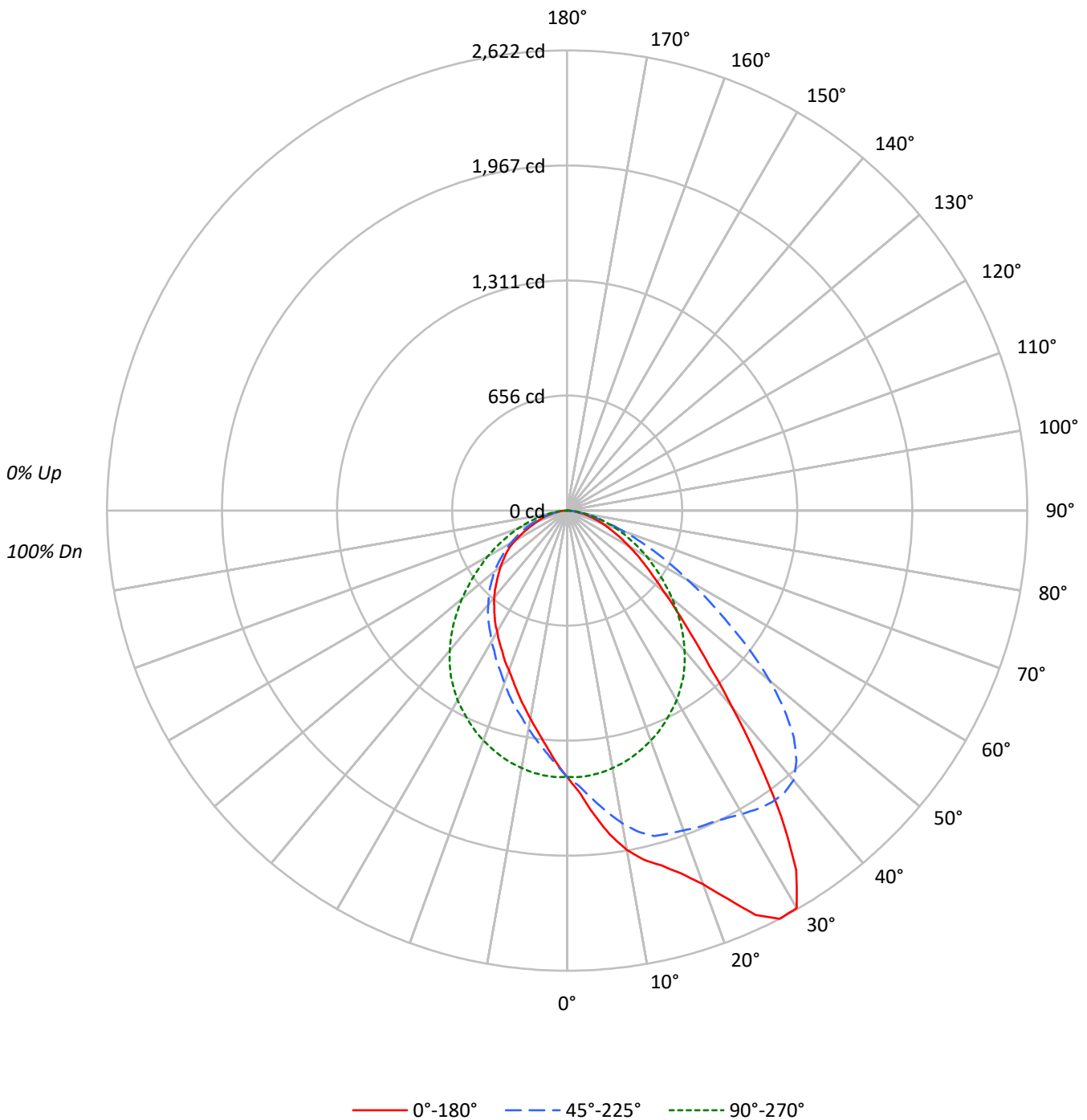
Lumens per Lamp: N/A
Luminaire Lumens: 4040.8 lumens
Efficiency: N/A
Efficacy: 128.3 lumens/watt
Spacing Criteria (0/90/45): 1.42 / 1.22 / 1.5
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

Input Watts (W): 31.5
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	66	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	48				48
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35	33				33
9	59	46	38	32	57	45	38	32	44	37	32	43	37	32	42	36	32	30				30
10	55	42	35	29	54	42	34	29	41	34	29	40	34	29	39	33	29	27				27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	10791	10791	10791	10791	10791
5°	12387	11769	10807	9853	9612
10°	14173	13056	10753	9120	8690
15°	15416	14127	10667	8492	7947
20°	17130	14666	10546	7905	7322
25°	19933	15363	10396	7450	6893
30°	21463	16378	10242	7065	6542
35°	18439	17618	10014	6759	6257
40°	13584	18617	9652	6485	5999
45°	10033	18366	9204	6245	5688
50°	7948	16669	8653	5984	5459
55°	6714	13913	8020	5617	5251
60°	5785	11365	7429	5271	4861
65°	5022	9172	6764	4840	4231
70°	4403	6968	6193	4378	3703
75°	3737	5075	5423	3869	3504
80°	2906	3671	4535	3401	2906
85°	2552	2699	3637	2895	2650

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 18366 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.1	3.6
10°-20°	432.4	10.7
20°-30°	689.6	17.1
30°-40°	837.3	20.7
40°-50°	754.5	18.7
50°-60°	580.2	14.4
60°-70°	376.5	9.3
70°-80°	181.2	4.5
80°-90°	42.9	1.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1268.1	31.4
0°-40°	2105.5	52.1
0°-60°	3440.2	85.1
0°-90°	4040.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4040.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1518	1518	1518	1518	1518	
5°	1736	1650	1515	1381	1347	173
15°	2095	1920	1450	1154	1080	601
25°	2542	1959	1326	950	879	1162
35°	2125	2031	1154	779	721	1300
45°	998	1827	916	621	566	793
55°	542	1123	647	453	424	491
65°	299	545	402	288	252	299
75°	136	185	198	141	128	146
85°	31	33	45	36	32	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1518.3	1518.3	1518.3	1518.3	1518.3	1518.3	1518.3	1518.3	1518.3	1518.3	1518.3
2.5°	1606.2	1612.2	1607.4	1610.4	1605.6	1603.2	1597.2	1588.1	1579.1	1570.7	1570.1
5°	1736.2	1735.0	1730.2	1723.6	1718.8	1706.7	1700.7	1680.3	1666.4	1649.6	1641.1
7.5°	1860.3	1857.3	1850.0	1841.0	1836.8	1821.1	1804.3	1778.4	1756.7	1730.2	1710.4
10°	1963.8	1963.2	1957.8	1951.8	1935.5	1918.1	1901.8	1874.7	1842.2	1809.1	1781.4
12.5°	2039.7	2036.7	2030.0	2019.8	2006.6	1994.5	1972.8	1948.2	1908.4	1874.7	1836.8
15°	2095.1	2093.9	2084.2	2080.6	2054.7	2037.9	2009.0	1984.3	1953.6	1919.9	1878.9
17.5°	2168.5	2170.9	2162.5	2142.0	2118.5	2092.6	2051.7	2011.4	1968.6	1929.5	1896.4
20°	2264.8	2258.8	2244.4	2219.7	2177.5	2145.6	2104.7	2054.7	1996.9	1939.1	1891.6
22.5°	2393.7	2387.0	2364.2	2334.1	2281.1	2222.7	2160.1	2085.4	2019.2	1953.0	1890.4
25°	2541.8	2529.1	2495.4	2462.9	2387.6	2325.6	2232.3	2143.2	2046.9	1959.0	1888.6
27.5°	2622.4	2622.4	2606.8	2571.3	2511.7	2420.1	2325.0	2206.4	2095.1	1974.6	1874.7
30°	2615.2	2611.0	2617.0	2602.0	2563.4	2494.8	2400.3	2275.7	2133.6	1995.7	1875.9
32.5°	2428.6	2430.4	2466.5	2491.2	2510.5	2493.6	2432.2	2319.6	2178.1	2016.2	1871.1
35°	2125.2	2130.0	2193.8	2235.9	2322.0	2371.4	2385.8	2325.0	2198.0	2030.6	1862.7
37.5°	1778.4	1778.4	1852.4	1916.3	2012.6	2134.2	2225.1	2248.0	2186.0	2030.0	1855.4
40°	1464.1	1462.3	1520.7	1599.0	1701.9	1836.2	1971.6	2087.8	2102.9	2006.6	1830.2
42.5°	1198.0	1195.0	1258.8	1302.2	1410.6	1530.4	1710.4	1874.7	1968.6	1933.7	1792.8
45°	998.2	995.8	1037.3	1086.7	1163.1	1287.7	1438.8	1621.3	1779.0	1827.2	1723.0
47.5°	847.7	848.9	871.1	912.7	977.7	1066.8	1202.2	1371.4	1566.5	1677.9	1635.1
50°	718.8	723.0	739.9	771.2	818.8	890.4	1006.6	1159.5	1360.0	1507.5	1516.5
52.5°	622.5	628.5	646.6	663.4	703.2	753.7	844.0	976.5	1142.0	1319.0	1382.3
55°	541.8	544.8	555.1	573.1	602.6	644.8	710.4	811.5	965.0	1122.8	1234.2
57.5°	474.4	474.4	481.0	493.7	517.1	555.1	599.0	682.7	812.1	954.8	1073.4
60°	407.0	409.4	414.2	428.0	443.7	472.6	515.3	568.3	680.3	799.5	927.1
62.5°	350.4	354.6	359.4	366.0	380.5	401.0	431.1	479.8	555.1	665.2	779.0
65°	298.6	302.8	303.4	311.2	320.9	337.7	360.6	396.1	458.7	545.4	639.4
67.5°	252.9	254.7	256.5	262.5	271.5	282.4	297.4	323.9	373.3	431.7	523.2
70°	211.9	213.1	213.7	220.3	224.6	234.2	242.0	258.9	290.2	335.3	406.4
72.5°	173.4	171.6	171.0	176.4	178.2	186.0	195.7	207.7	224.6	256.5	309.4
75°	136.1	136.7	137.3	140.3	140.9	144.5	150.5	158.3	166.2	184.8	218.5
77.5°	104.8	102.3	102.3	106.0	107.2	107.8	112.0	116.2	120.4	131.2	144.5
80°	71.0	72.2	72.2	72.2	72.8	74.0	76.5	80.1	83.1	89.7	92.1
82.5°	50.6	50.6	50.0	51.2	51.8	52.4	52.4	52.4	54.2	56.0	58.4
85°	31.3	31.9	30.1	31.3	31.9	31.9	31.9	31.9	33.7	33.1	33.7
87.5°	13.2	13.8	13.8	14.4	14.4	15.1	14.4	15.1	14.4	14.4	15.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1518.3	1518.3	1518.3	1518.3	1518.3	1518.3	1518.3	1518.3	1518.3	1518.3	1518.3
2.5°	1568.3	1561.1	1557.4	1550.2	1540.6	1534.6	1528.5	1520.1	1513.5	1503.3	1494.2
5°	1626.1	1611.6	1598.4	1580.3	1562.9	1547.8	1532.2	1514.7	1499.0	1481.6	1462.9
7.5°	1690.5	1667.6	1639.9	1608.0	1580.9	1557.4	1531.0	1505.1	1481.6	1453.9	1428.6
10°	1752.5	1715.8	1679.1	1636.3	1596.6	1561.7	1526.1	1490.0	1459.3	1425.0	1393.7
12.5°	1800.7	1765.7	1711.0	1658.0	1606.2	1561.1	1516.5	1472.6	1432.2	1394.3	1357.0
15°	1842.8	1785.0	1738.7	1680.9	1617.6	1556.2	1500.9	1449.7	1400.9	1356.4	1318.4
17.5°	1854.8	1803.1	1752.5	1685.1	1617.0	1547.2	1483.4	1422.6	1368.4	1319.0	1276.3
20°	1853.6	1801.3	1746.5	1682.1	1609.8	1533.4	1462.3	1394.3	1332.9	1276.3	1230.5
22.5°	1835.6	1785.0	1729.6	1664.6	1591.2	1512.3	1437.6	1362.4	1295.6	1236.6	1189.6
25°	1816.3	1752.5	1694.7	1629.1	1559.3	1486.4	1406.9	1325.7	1255.8	1194.4	1141.4
27.5°	1799.5	1723.0	1652.0	1587.5	1515.9	1450.3	1371.4	1286.5	1214.9	1150.5	1095.7
30°	1772.4	1691.7	1605.6	1535.2	1465.9	1397.3	1325.1	1248.0	1169.7	1104.1	1049.3
32.5°	1748.9	1647.1	1553.8	1474.4	1405.1	1344.9	1275.7	1201.6	1125.2	1062.6	1003.6
35°	1723.0	1601.4	1503.9	1410.6	1341.3	1275.7	1220.9	1154.1	1078.2	1012.0	959.0
37.5°	1692.3	1554.4	1442.5	1347.3	1275.7	1208.3	1158.9	1099.3	1030.7	965.0	912.7
40°	1658.0	1506.3	1377.4	1279.3	1202.2	1134.8	1093.3	1040.3	981.9	916.9	868.1
42.5°	1614.6	1455.1	1318.4	1211.3	1125.8	1065.0	1023.4	979.5	925.9	869.3	816.3
45°	1559.9	1391.3	1248.0	1134.8	1050.5	991.5	948.2	915.7	872.9	820.0	770.0
47.5°	1493.0	1324.5	1175.8	1058.4	977.1	920.5	880.2	847.7	815.1	769.4	721.8
50°	1404.5	1248.0	1105.3	985.5	899.4	844.6	808.5	782.6	753.1	715.8	672.5
52.5°	1307.0	1161.9	1022.2	910.3	827.2	772.4	735.1	713.4	691.1	660.4	623.1
55°	1193.8	1075.8	942.8	833.2	751.9	697.7	668.3	647.2	628.5	605.0	573.7
57.5°	1074.0	970.5	854.9	753.7	677.3	626.1	600.2	582.8	567.1	550.3	524.4
60°	948.2	874.7	765.2	672.5	605.6	563.5	538.8	522.6	508.1	494.3	475.0
62.5°	817.0	756.1	674.3	595.4	535.8	496.1	478.0	464.2	449.1	437.1	423.2
65°	683.9	649.0	592.4	518.3	463.6	431.1	413.6	402.2	394.9	381.1	370.2
67.5°	562.9	543.6	495.5	445.5	403.4	373.9	357.6	349.2	341.3	334.7	322.7
70°	447.9	434.1	406.4	370.8	337.7	312.5	300.4	298.0	287.2	280.5	274.5
72.5°	341.3	337.7	314.9	299.2	280.5	260.7	251.6	246.8	239.6	233.6	231.2
75°	242.6	248.0	240.8	233.0	224.0	207.7	199.9	197.5	190.8	189.0	186.0
77.5°	165.6	173.4	175.8	172.2	168.0	162.5	157.1	154.7	148.1	146.9	145.1
80°	104.2	115.6	119.8	119.2	117.4	118.0	111.4	110.8	107.8	106.0	107.8
82.5°	63.2	69.2	77.1	78.9	76.5	77.7	75.9	73.4	73.4	74.7	72.2
85°	34.3	34.9	38.5	40.9	43.9	46.4	43.9	44.6	43.9	43.9	42.1
87.5°	15.1	15.7	15.7	15.1	16.3	17.5	19.9	21.1	20.5	18.7	16.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1518.3	1518.3	1518.3	1518.3	1518.3	1518.3	1518.3	1518.3	1518.3	1518.3	1518.3
2.5°	1487.0	1482.8	1475.6	1469.5	1455.7	1446.1	1444.9	1445.5	1444.3	1443.1	1442.5
5°	1450.9	1437.0	1423.8	1412.4	1396.7	1381.1	1373.8	1370.8	1369.6	1363.0	1366.6
7.5°	1412.4	1391.3	1375.6	1354.0	1335.3	1322.1	1309.4	1303.4	1302.2	1293.2	1290.7
10°	1371.4	1346.1	1322.7	1301.0	1282.3	1263.7	1248.6	1243.2	1236.0	1228.7	1217.9
12.5°	1331.1	1299.8	1273.9	1249.8	1224.5	1203.5	1191.4	1183.6	1174.6	1167.9	1164.3
15°	1282.9	1256.4	1224.5	1198.6	1172.7	1154.1	1137.8	1123.4	1115.0	1109.5	1094.5
17.5°	1239.6	1204.7	1174.6	1149.9	1121.6	1100.5	1083.6	1071.6	1057.2	1046.3	1036.7
20°	1193.2	1157.1	1129.4	1099.9	1071.0	1045.1	1024.0	1014.4	1004.2	993.9	988.5
22.5°	1143.2	1111.9	1080.6	1049.9	1019.2	991.5	978.3	964.4	955.4	945.2	938.0
25°	1099.9	1065.6	1034.3	1000.0	966.3	950.0	931.9	918.1	910.9	900.6	892.8
27.5°	1053.5	1020.4	983.1	947.6	927.7	900.0	888.0	877.2	867.5	857.3	851.9
30°	1010.2	971.7	934.3	906.7	880.8	860.9	849.5	836.2	823.0	818.2	810.9
32.5°	964.4	922.9	890.4	862.7	841.0	817.0	806.1	795.3	782.6	776.6	770.0
35°	916.9	876.6	844.6	819.4	797.1	779.0	767.0	755.5	747.7	738.7	733.9
37.5°	866.9	832.0	801.3	776.0	755.5	741.1	726.0	717.0	706.2	697.7	694.1
40°	819.4	788.1	758.6	735.1	716.4	699.0	685.7	674.3	667.6	660.4	654.4
42.5°	776.6	744.1	718.8	694.1	677.3	660.4	647.2	638.8	627.3	624.3	615.9
45°	730.9	700.8	675.5	652.6	635.1	621.3	605.6	595.4	588.2	581.0	577.9
47.5°	684.5	656.8	633.3	612.3	594.2	578.5	566.5	555.7	547.8	541.2	537.6
50°	639.4	615.3	591.8	571.3	552.7	541.2	526.8	514.7	508.7	501.5	497.3
52.5°	591.8	571.9	546.6	529.2	511.7	496.7	482.2	474.4	468.4	462.4	459.3
55°	547.2	526.2	504.5	485.8	469.0	453.3	441.9	435.9	428.0	424.4	423.8
57.5°	501.5	479.8	461.8	444.9	425.6	413.6	403.4	396.1	389.5	386.5	386.5
60°	451.5	434.1	417.2	398.5	384.7	370.8	360.0	355.2	348.6	347.4	343.2
62.5°	405.8	389.5	373.3	355.8	343.2	329.3	321.5	314.9	311.2	306.4	301.6
65°	358.2	343.8	328.1	313.1	302.8	287.8	280.5	272.7	268.5	263.1	257.1
67.5°	312.5	298.6	284.2	270.3	261.9	247.4	242.6	233.0	230.0	224.0	218.5
70°	264.3	254.7	243.2	229.4	222.1	210.7	205.9	196.9	192.0	188.4	185.4
72.5°	222.8	213.7	200.5	191.4	182.4	175.2	167.4	163.1	158.9	155.9	155.3
75°	181.8	170.4	162.5	154.1	148.1	140.9	137.3	134.3	132.4	130.6	128.8
77.5°	139.1	134.3	126.4	118.0	113.2	110.2	107.8	106.6	104.8	104.2	102.3
80°	103.5	96.9	92.1	89.1	85.5	83.1	81.3	77.1	74.7	73.4	72.2
82.5°	68.6	66.8	63.2	60.2	57.2	56.6	54.8	53.6	53.0	53.0	52.4
85°	41.5	36.7	36.7	36.1	36.1	35.5	34.3	34.3	33.1	34.9	34.9
87.5°	16.9	16.9	15.7	15.7	16.3	15.1	14.4	14.4	14.4	13.8	14.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P243776

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CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1518.3	1518.3	1518.3	1518.3
2.5°	1442.5	1439.4	1440.0	1436.4
5°	1360.0	1358.2	1352.2	1347.3
7.5°	1284.7	1276.9	1276.3	1271.5
10°	1214.3	1207.1	1203.5	1204.1
12.5°	1152.9	1145.1	1145.1	1140.2
15°	1087.3	1079.4	1080.6	1080.0
17.5°	1033.1	1027.7	1023.4	1019.8
20°	980.1	973.5	971.1	968.1
22.5°	931.3	926.5	927.1	927.1
25°	885.0	885.6	880.2	879.0
27.5°	844.0	842.8	841.6	839.2
30°	805.5	800.7	799.5	797.1
32.5°	765.8	765.2	760.4	762.2
35°	725.4	723.6	722.4	721.2
37.5°	688.1	684.5	683.9	682.7
40°	650.2	649.0	643.6	646.6
42.5°	609.3	606.8	606.8	606.8
45°	574.9	568.3	568.3	565.9
47.5°	536.4	534.0	532.8	528.6
50°	498.5	494.9	493.7	493.7
52.5°	459.3	458.7	459.9	457.5
55°	425.0	425.6	425.0	423.8
57.5°	387.7	384.7	384.7	385.3
60°	343.2	343.2	344.4	342.0
62.5°	300.4	299.2	295.0	293.8
65°	256.5	251.6	251.0	251.6
67.5°	217.3	215.5	212.5	213.1
70°	183.6	183.0	180.0	178.2
72.5°	153.5	153.5	151.7	151.7
75°	128.2	127.0	126.4	127.6
77.5°	98.7	95.7	96.9	95.1
80°	71.6	72.8	71.6	71.0
82.5°	53.0	51.8	52.4	51.8
85°	33.7	32.5	33.1	32.5
87.5°	13.8	14.4	14.4	13.2
90°	0.0	0.0	0.0	0.0



TEST NUMBER: P243776

CATALOG NUMBER: S125RDRP-H1090D835-X4F0-XX-UDD-A-W

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	18.19	19.73	18.55	20.04	20.35	18.88	20.42	19.25	20.74	21.05
	3H	19.27	20.65	19.65	20.98	21.34	20.36	21.74	20.74	22.07	22.43
	4H	19.63	20.92	20.03	21.27	21.65	20.88	22.18	21.28	22.53	22.91
	6H	19.84	21.04	20.26	21.41	21.80	21.24	22.44	21.65	22.80	23.20
	8H	19.90	21.04	20.33	21.43	21.83	21.34	22.48	21.77	22.87	23.27
	12H	19.94	21.03	20.37	21.41	21.84	21.40	22.49	21.83	22.87	23.30
4H	2H	19.71	21.00	20.11	21.35	21.73	19.76	21.05	20.16	21.40	21.78
	3H	20.75	21.83	21.16	22.23	22.63	21.42	22.49	21.83	22.89	23.29
	4H	21.11	22.08	21.55	22.50	22.93	22.02	22.98	22.45	23.40	23.84
	6H	21.36	22.20	21.81	22.64	23.10	22.45	23.29	22.91	23.73	24.19
	8H	21.42	22.21	21.88	22.65	23.12	22.57	23.36	23.04	23.80	24.27
	12H	21.47	22.17	21.95	22.65	23.12	22.66	23.36	23.14	23.84	24.31
8H	4H	21.47	22.26	21.94	22.70	23.17	22.17	22.95	22.63	23.40	23.86
	6H	21.77	22.42	22.26	22.91	23.38	22.69	23.34	23.19	23.83	24.31
	8H	21.86	22.44	22.38	22.95	23.44	22.87	23.45	23.38	23.96	24.45
	12H	21.95	22.46	22.46	22.95	23.52	23.01	23.52	23.52	24.01	24.58
12H	4H	21.50	22.20	21.98	22.68	23.15	22.16	22.86	22.64	23.34	23.81
	6H	21.80	22.38	22.31	22.89	23.38	22.68	23.27	23.20	23.78	24.26
	8H	21.93	22.45	22.44	22.94	23.50	22.90	23.42	23.41	23.91	24.47