

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: P243609

Luminaire Tested: S124RDRP-H1020D840-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243609  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-70)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDRP-H1020D840-X4F0-XX-UDD-A-W  
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

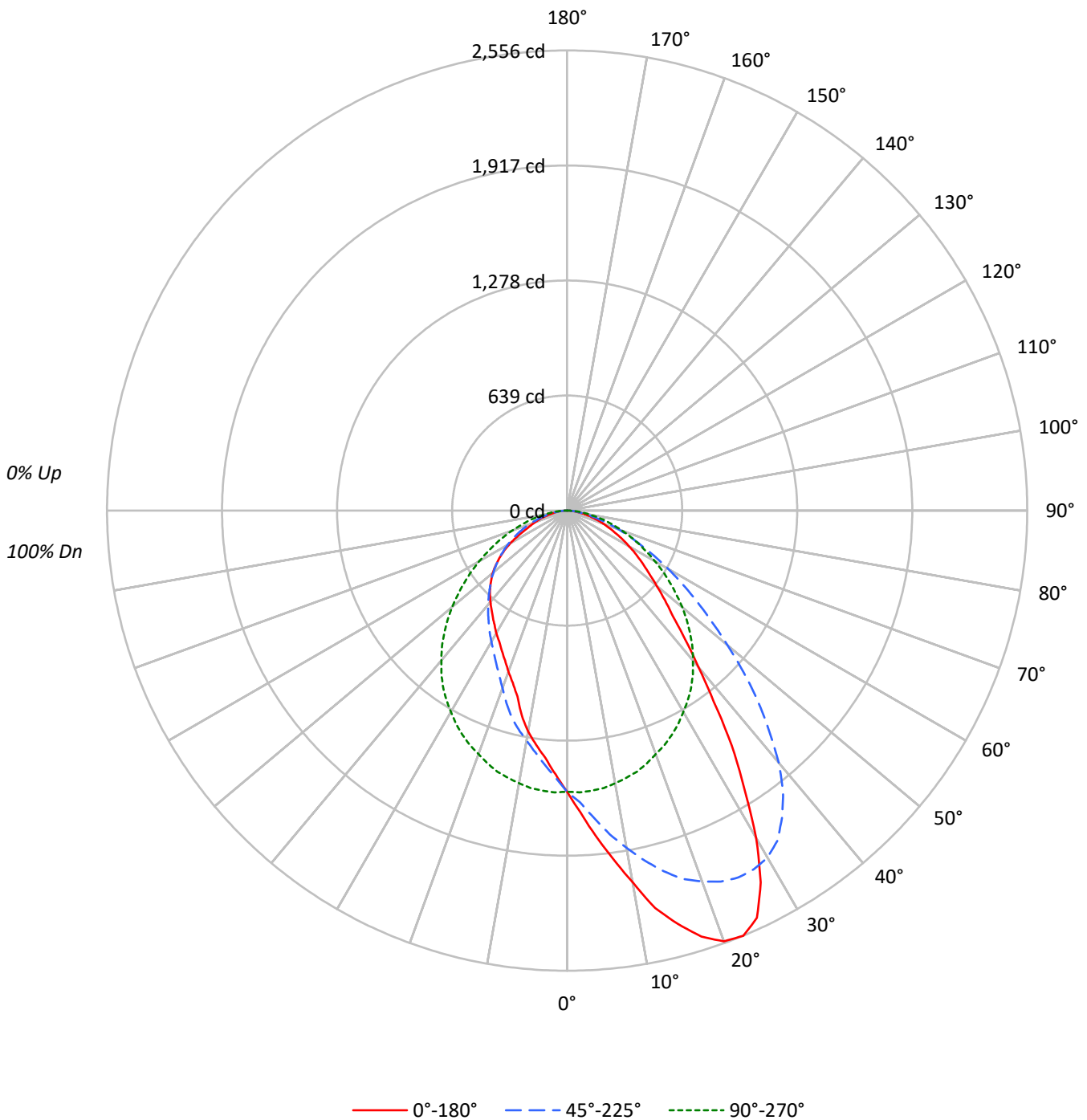
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4029.6 lumens  
Efficiency: N/A  
Efficacy: 127.9 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.23 / 1.39  
Luminous Opening: Rectangular (W 3.88' x L: 0.31' 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	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	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88					86				
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75					73				
3	92	83	75	69	90	81	74	68	78	72	67	76	70	66	73	69	65					63				
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57					55				
5	79	66	58	52	77	65	57	51	63	56	51	61	55	50	60	54	50					48				
6	73	60	52	46	71	59	51	45	58	50	45	56	50	45	54	49	44					42				
7	68	55	46	41	66	54	46	40	53	45	40	51	45	40	50	44	40					38				
8	63	50	42	36	62	50	42	36	48	41	36	47	41	36	46	40	36					34				
9	59	46	38	33	58	46	38	33	45	38	33	43	37	33	42	37	32					31				
10	56	43	35	30	54	42	35	30	41	35	30	40	34	30	39	34	30					28				

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

	0°	45°	90°	135°	180°
0°	13878	13878	13878	13878	13878
5°	16166	15293	13937	12651	12304
10°	18933	17171	13878	11705	11250
15°	21876	19091	13808	10938	9825
20°	24086	20733	13613	9932	9006
25°	24472	22058	13489	9165	8420
30°	21542	22840	13249	8624	8075
35°	17285	22583	13024	8241	7812
40°	13150	21214	12607	7909	7690
45°	10440	18847	12145	7636	7597
50°	8962	16068	11544	7390	7466
55°	7914	13644	10799	7132	7104
60°	7090	11532	10020	6809	6507
65°	6240	9488	9259	6344	5473
70°	5562	7823	8405	5814	4930
75°	4846	6137	7642	5117	4386
80°	4110	4699	6568	4325	4044
85°	3600	3845	5640	4212	4090

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 55°  
 Vertical Angle: 45°  
 Luminance: 20284 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	151.5	3.8
10°-20°	459.4	11.4
20°-30°	717.0	17.8
30°-40°	799.5	19.8
40°-50°	718.7	17.8
50°-60°	567.9	14.1
60°-70°	377.2	9.4
70°-80°	189.1	4.7
80°-90°	49.3	1.2
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°	1327.9	33.0
0°-40°	2127.5	52.8
0°-60°	3414.1	84.7
0°-90°	4029.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4029.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1561	1561	1561	1561	1561	
5°	1812	1714	1562	1418	1379	182
15°	2377	2074	1500	1189	1068	676
25°	2495	2249	1375	934	858	1117
35°	1593	2081	1200	759	720	990
45°	830	1499	966	607	604	658
55°	511	880	697	460	458	460
65°	297	451	440	302	260	297
75°	141	179	222	149	128	151
85°	35	38	55	41	40	40
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°	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3
2.5°	1676.8	1670.8	1670.1	1662.2	1661.6	1653.7	1651.3	1644.6	1631.2	1620.9	1621.5
5°	1811.8	1806.9	1806.3	1798.4	1796.0	1786.3	1771.1	1752.8	1731.6	1713.9	1702.4
7.5°	1950.4	1958.9	1949.8	1949.8	1932.2	1920.6	1890.8	1875.6	1839.2	1813.6	1786.9
10°	2097.6	2105.5	2101.8	2094.5	2071.4	2047.7	2016.7	1986.9	1942.5	1902.4	1875.6
12.5°	2261.7	2238.0	2253.2	2230.7	2211.9	2174.2	2144.4	2084.8	2049.5	1991.2	1938.9
15°	2377.2	2368.1	2367.5	2352.3	2331.6	2290.3	2258.1	2196.1	2135.9	2074.5	2015.5
17.5°	2480.6	2481.8	2473.3	2449.0	2422.2	2382.1	2338.3	2283.0	2214.3	2146.2	2076.3
20°	2546.3	2546.9	2540.8	2528.0	2498.8	2462.4	2417.4	2345.0	2267.2	2191.8	2121.9
22.5°	2556.0	2557.8	2556.0	2548.1	2528.0	2498.2	2456.9	2395.5	2317.0	2230.7	2147.4
25°	2495.2	2501.3	2501.9	2512.8	2502.5	2490.9	2460.5	2408.9	2336.5	2249.0	2158.4
27.5°	2328.6	2345.6	2361.4	2380.9	2398.5	2414.3	2416.8	2389.4	2327.4	2245.9	2159.6
30°	2098.8	2118.8	2150.5	2171.1	2225.8	2260.5	2307.3	2317.7	2287.9	2225.2	2141.9
32.5°	1831.3	1852.5	1864.7	1932.8	2011.2	2067.8	2145.6	2191.8	2203.4	2173.6	2105.5
35°	1592.9	1596.6	1605.7	1682.9	1760.7	1846.5	1943.1	2023.4	2078.1	2081.1	2047.7
37.5°	1337.6	1341.8	1377.7	1436.7	1504.2	1598.4	1709.7	1824.0	1924.3	1970.5	1960.8
40°	1133.3	1132.1	1170.4	1221.4	1287.1	1385.0	1499.9	1624.5	1731.6	1828.2	1851.3
42.5°	967.9	972.2	1005.0	1034.8	1098.0	1166.7	1289.5	1419.0	1556.5	1662.2	1732.8
45°	830.5	841.5	864.0	891.9	939.3	1002.6	1102.9	1231.8	1372.2	1499.3	1583.8
47.5°	735.7	738.7	750.3	784.9	816.5	867.6	953.3	1062.8	1187.4	1329.7	1440.9
50°	648.1	655.4	659.7	680.3	711.3	760.0	826.3	907.7	1031.1	1161.9	1301.1
52.5°	572.7	577.0	584.9	603.7	628.1	662.1	714.4	786.1	888.9	1009.9	1141.2
55°	510.7	511.3	519.2	532.6	551.4	577.6	627.4	679.1	770.3	880.4	999.5
57.5°	454.8	451.1	458.4	466.3	484.6	507.1	539.3	592.2	663.3	756.9	864.6
60°	398.8	401.9	401.3	410.4	420.1	442.6	470.0	504.6	563.0	648.7	739.9
62.5°	346.6	345.9	352.0	357.5	364.2	382.4	404.9	433.5	479.1	542.3	630.5
65°	296.7	297.9	302.8	307.0	314.3	325.9	342.9	366.0	402.5	451.1	525.3
67.5°	251.7	256.0	258.4	259.6	266.3	274.8	289.4	308.3	333.2	372.1	434.1
70°	214.0	215.2	216.4	220.7	223.7	228.6	239.5	249.9	272.4	301.0	345.9
72.5°	178.7	177.5	181.2	182.4	183.6	188.5	195.2	200.6	215.2	239.5	267.5
75°	141.1	141.7	142.3	144.1	149.0	149.6	152.6	158.7	169.0	178.7	197.6
77.5°	105.8	107.6	107.0	108.8	110.7	112.5	113.7	119.2	126.5	134.4	143.5
80°	80.3	80.3	80.3	81.5	80.3	84.5	84.5	86.3	88.2	91.8	98.5
82.5°	54.7	55.9	56.5	57.2	57.8	57.8	58.4	59.6	62.0	63.2	65.1
85°	35.3	34.0	34.7	34.7	34.7	34.7	35.9	37.1	37.1	37.7	39.5
87.5°	15.8	15.8	15.8	15.8	15.2	15.8	16.4	16.4	17.0	17.0	18.2
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°	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3
2.5°	1617.9	1616.0	1606.9	1597.2	1588.1	1578.9	1575.9	1566.8	1555.8	1546.1	1535.2
5°	1690.2	1675.6	1655.6	1634.9	1613.6	1594.1	1578.9	1561.9	1542.5	1519.4	1501.1
7.5°	1763.2	1736.4	1703.6	1673.2	1636.7	1607.5	1578.3	1554.0	1526.1	1493.2	1468.3
10°	1834.3	1789.9	1749.8	1701.8	1655.6	1615.4	1578.3	1537.6	1500.5	1465.3	1430.6
12.5°	1890.8	1846.5	1788.7	1729.7	1670.1	1617.9	1568.0	1520.0	1473.8	1431.2	1392.9
15°	1955.3	1891.5	1820.3	1755.3	1673.8	1609.3	1552.2	1500.5	1447.6	1395.9	1354.0
17.5°	2002.7	1927.3	1839.2	1764.4	1686.0	1605.7	1537.0	1471.9	1411.1	1357.0	1313.9
20°	2039.2	1949.8	1861.7	1766.8	1673.2	1591.1	1513.9	1439.1	1377.7	1318.7	1273.1
22.5°	2055.0	1960.8	1862.9	1760.1	1660.4	1567.4	1487.1	1409.9	1340.6	1279.8	1226.9
25°	2061.7	1958.3	1856.8	1740.1	1639.1	1544.3	1454.9	1375.3	1304.1	1235.4	1183.1
27.5°	2056.2	1945.6	1828.8	1718.8	1604.5	1511.5	1416.6	1335.8	1261.6	1195.3	1136.9
30°	2041.6	1916.4	1800.3	1676.8	1566.8	1468.9	1376.5	1290.8	1216.0	1148.5	1090.7
32.5°	2003.9	1883.5	1751.6	1631.2	1512.7	1416.0	1332.1	1247.6	1171.6	1101.1	1045.1
35°	1957.1	1839.2	1701.2	1575.3	1458.0	1360.1	1275.6	1200.2	1125.4	1050.6	993.5
37.5°	1898.1	1778.4	1645.2	1509.6	1394.7	1299.9	1222.7	1146.7	1072.5	1003.8	940.0
40°	1818.5	1709.1	1575.3	1439.1	1323.6	1232.4	1156.4	1086.5	1020.8	953.3	884.6
42.5°	1719.4	1636.1	1498.1	1363.7	1250.6	1160.0	1092.6	1029.9	966.7	897.4	835.4
45°	1613.6	1542.5	1417.2	1281.6	1174.0	1085.9	1021.4	966.1	906.5	845.1	780.0
47.5°	1494.4	1441.5	1333.3	1199.0	1085.9	1010.5	950.9	900.4	846.3	791.6	728.4
50°	1360.1	1327.8	1235.4	1113.2	1005.6	929.0	879.8	834.8	788.6	733.8	679.7
52.5°	1225.7	1219.6	1133.3	1025.7	924.1	853.0	805.0	763.6	725.9	674.3	628.7
55°	1084.7	1102.9	1031.1	932.0	841.5	772.8	730.2	696.8	663.9	620.1	576.4
57.5°	959.4	980.1	930.8	839.6	755.1	696.8	660.3	629.9	601.3	561.2	532.0
60°	820.8	858.5	832.3	749.0	674.3	622.0	587.9	563.6	539.9	505.2	479.7
62.5°	711.3	737.5	722.3	660.3	594.0	551.4	521.0	498.6	479.7	453.0	428.0
65°	594.0	626.8	618.9	578.2	519.8	480.9	457.8	440.2	420.7	399.4	378.8
67.5°	488.2	522.3	520.4	492.5	449.3	417.1	395.2	382.4	366.6	345.9	333.2
70°	392.8	424.4	425.6	411.6	381.2	350.8	335.0	323.4	311.3	296.1	287.0
72.5°	305.2	333.8	338.6	332.0	312.5	292.4	278.5	270.6	260.2	247.5	239.5
75°	228.0	248.7	260.2	257.2	249.3	235.9	228.0	222.5	212.2	203.1	196.4
77.5°	162.3	178.7	190.3	195.2	191.5	186.0	178.7	174.5	163.5	159.3	155.6
80°	108.8	123.4	133.8	136.8	138.6	137.4	130.7	128.3	122.8	121.0	117.3
82.5°	66.9	74.8	82.1	90.0	93.6	93.6	90.0	90.6	85.7	83.3	82.1
85°	40.7	42.6	43.8	49.9	54.7	56.5	54.7	55.3	53.5	51.7	49.9
87.5°	18.8	18.8	19.5	20.7	21.9	25.5	26.8	28.6	26.1	26.1	21.9
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°	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3
2.5°	1528.5	1520.6	1514.5	1504.8	1496.9	1484.1	1479.8	1479.8	1482.3	1479.2	1482.3
5°	1488.4	1473.8	1458.0	1444.0	1428.8	1417.8	1406.9	1404.5	1403.2	1395.9	1396.5
7.5°	1448.2	1428.8	1408.7	1390.5	1371.6	1354.6	1343.0	1338.2	1333.9	1329.1	1323.6
10°	1405.1	1382.6	1358.9	1338.2	1319.9	1296.8	1285.3	1281.6	1269.5	1267.0	1258.5
12.5°	1359.5	1336.4	1312.6	1285.9	1268.3	1245.8	1228.7	1220.8	1209.3	1200.8	1188.0
15°	1323.6	1294.4	1262.8	1236.6	1213.5	1188.6	1165.5	1150.3	1135.1	1111.4	1099.9
17.5°	1279.2	1245.8	1218.4	1190.4	1157.0	1120.5	1093.2	1070.7	1054.3	1034.8	1023.2
20°	1231.2	1200.2	1166.1	1126.6	1091.3	1050.0	1025.1	1006.2	993.5	981.9	975.8
22.5°	1188.6	1152.7	1105.9	1068.2	1019.0	986.2	966.1	953.9	941.8	929.6	923.5
25°	1142.4	1100.5	1043.3	997.1	960.0	934.5	915.0	903.5	890.7	883.4	874.3
27.5°	1096.8	1042.7	985.5	943.6	914.4	884.6	868.2	859.1	849.4	839.0	831.7
30°	1041.5	980.1	932.7	894.4	865.2	840.2	828.1	814.7	806.2	800.1	795.9
32.5°	983.7	924.8	881.6	848.8	820.2	801.3	786.1	777.6	770.3	763.6	758.8
35°	929.6	872.5	836.0	804.4	780.7	759.4	747.8	739.9	733.8	728.4	725.9
37.5°	876.1	827.5	788.0	763.0	738.1	721.1	710.1	702.8	699.2	693.7	694.3
40°	823.2	779.4	747.8	719.3	696.1	681.6	673.0	670.0	664.5	662.7	664.5
42.5°	775.8	735.7	705.3	678.5	658.5	644.5	637.8	633.5	631.7	631.1	631.7
45°	729.6	691.9	662.7	640.8	620.1	607.4	601.9	598.9	597.0	600.1	600.7
47.5°	683.4	649.3	623.2	597.7	580.6	571.5	566.0	563.6	565.4	566.6	570.9
50°	637.8	606.2	578.8	556.3	542.9	534.4	532.6	528.3	531.4	533.2	536.2
52.5°	591.6	563.0	538.7	517.4	503.4	497.9	493.7	491.9	496.1	496.1	499.2
55°	544.8	519.8	497.3	477.9	466.9	460.2	457.2	454.8	457.2	457.8	457.2
57.5°	501.0	477.3	453.6	437.1	428.0	420.7	417.7	416.5	415.9	418.3	417.7
60°	454.8	432.3	413.4	396.4	387.3	383.0	376.3	377.6	377.6	377.6	371.5
62.5°	408.6	386.1	369.7	358.1	347.2	339.9	338.6	336.8	333.2	332.6	324.7
65°	361.1	344.1	330.1	318.6	307.6	301.6	299.7	294.3	290.0	282.1	276.6
67.5°	317.4	305.2	288.8	279.1	269.9	262.7	256.0	251.7	243.2	235.3	230.4
70°	273.6	260.8	249.9	239.5	230.4	223.7	215.8	207.9	202.5	197.6	193.9
72.5°	229.8	218.9	209.8	200.0	190.3	183.6	177.5	171.5	169.0	166.6	164.8
75°	189.1	178.7	170.2	162.3	156.9	149.0	145.9	143.5	141.1	138.0	134.4
77.5°	149.6	141.7	135.0	128.3	123.4	119.2	116.7	109.4	103.4	102.1	100.9
80°	111.3	105.2	100.9	96.1	90.6	84.5	82.7	80.3	79.0	79.0	79.6
82.5°	77.8	74.2	69.3	65.1	63.2	60.8	60.8	60.2	59.6	60.2	60.2
85°	47.4	42.6	41.3	40.7	41.3	41.3	41.3	41.3	40.7	41.3	40.1
87.5°	20.7	22.5	23.1	21.3	21.9	20.7	21.3	21.3	21.3	21.9	21.3
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: P243609

CATALOG NUMBER: S124RDRP-H1020D840-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1561.3	1561.3	1561.3	1561.3
2.5°	1478.6	1478.6	1472.5	1467.7
5°	1395.3	1387.4	1386.2	1378.9
7.5°	1317.5	1316.3	1313.3	1313.3
10°	1255.5	1251.2	1247.0	1246.4
12.5°	1167.9	1174.0	1166.7	1164.9
15°	1091.3	1086.5	1080.4	1067.6
17.5°	1020.2	1011.1	1008.7	1003.2
20°	964.3	957.6	955.2	952.1
22.5°	911.4	910.2	902.9	901.0
25°	872.5	866.4	861.5	858.5
27.5°	829.9	825.6	823.2	818.4
30°	791.0	789.8	786.7	786.7
32.5°	755.7	752.1	752.1	751.5
35°	723.5	724.7	721.1	719.9
37.5°	693.1	691.3	691.9	690.7
40°	663.3	662.1	662.1	662.7
42.5°	632.9	633.5	634.7	634.7
45°	602.5	603.1	604.3	604.3
47.5°	573.9	572.7	573.9	572.7
50°	537.5	541.1	540.5	539.9
52.5°	500.4	499.2	501.6	501.0
55°	460.2	458.4	460.9	458.4
57.5°	415.3	415.9	415.9	414.6
60°	370.3	368.4	366.0	366.0
62.5°	318.0	312.5	308.9	311.3
65°	267.5	263.3	262.0	260.2
67.5°	227.4	222.5	220.7	220.1
70°	192.7	190.3	189.7	189.7
72.5°	163.5	163.5	161.7	160.5
75°	133.1	130.7	127.7	127.7
77.5°	99.7	99.1	98.5	98.5
80°	77.8	77.8	78.4	79.0
82.5°	58.4	59.0	59.6	59.6
85°	39.5	39.5	40.1	40.1
87.5°	21.3	21.3	21.3	20.7
90°	0.0	0.0	0.0	0.0



TEST NUMBER: P243609  
 CATALOG NUMBER: S124RDRP-H1020D840-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	18.48	20.01	18.84	20.33	20.64	20.18	21.71	20.54	22.02	22.34
	3H	19.71	21.09	20.09	21.42	21.78	21.66	23.04	22.04	23.36	23.73
	4H	20.15	21.44	20.54	21.79	22.16	22.20	23.49	22.60	23.84	24.22
	6H	20.42	21.62	20.84	21.98	22.38	22.59	23.78	23.00	24.15	24.54
	8H	20.51	21.65	20.93	22.04	22.44	22.71	23.84	23.13	24.23	24.63
	12H	20.56	21.65	20.99	22.03	22.46	22.78	23.87	23.21	24.25	24.68
4H	2H	19.69	20.98	20.09	21.33	21.71	20.70	22.00	21.10	22.34	22.72
	3H	20.96	22.03	21.37	22.43	22.83	22.48	23.55	22.89	23.95	24.35
	4H	21.43	22.39	21.86	22.81	23.25	23.14	24.10	23.57	24.52	24.96
	6H	21.76	22.60	22.22	23.04	23.50	23.63	24.48	24.09	24.92	25.38
	8H	21.86	22.65	22.33	23.09	23.56	23.79	24.58	24.25	25.02	25.49
	12H	21.94	22.64	22.42	23.12	23.59	23.90	24.61	24.39	25.08	25.55
8H	4H	21.84	22.62	22.30	23.07	23.53	23.27	24.05	23.73	24.49	24.96
	6H	22.24	22.89	22.73	23.38	23.85	23.86	24.51	24.36	25.00	25.48
	8H	22.38	22.96	22.90	23.47	23.96	24.08	24.66	24.59	25.17	25.66
	12H	22.50	23.02	23.01	23.51	24.08	24.26	24.78	24.77	25.27	25.83
12H	4H	21.88	22.58	22.36	23.06	23.53	23.26	23.96	23.74	24.44	24.91
	6H	22.29	22.88	22.81	23.38	23.87	23.86	24.44	24.37	24.95	25.44
	8H	22.48	23.00	22.99	23.49	24.06	24.12	24.63	24.63	25.12	25.69