

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: NEO-RAY

Report Number: P832298

Luminaire Tested: S123RDIP-S560D805U935-4F0-1E-UDD-G4

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P832298  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 05/03/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-S560D805U935-4F0-1E-UDD-G4  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 560 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: -

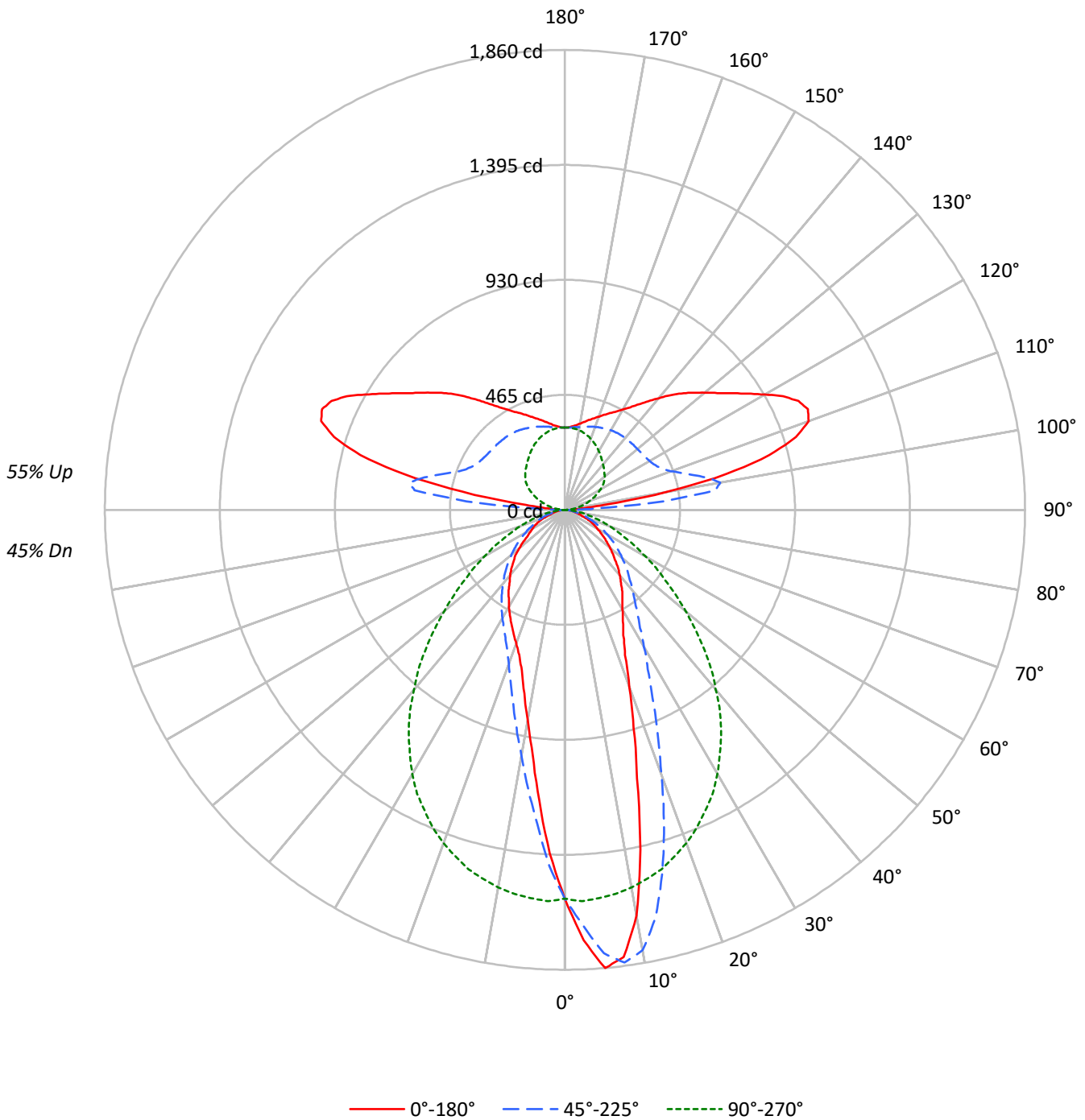
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4588.1 lumens  
Efficiency: N/A  
Efficacy: 114.1 lumens/watt  
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8  
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 40.2  
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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	45				45
1	97	93	90	87	89	86	83	80	72	70	68	59	57	56	47	46	45				40	
2	89	82	77	72	82	76	71	67	64	60	57	53	50	48	42	41	39				35	
3	82	73	66	61	75	68	62	57	57	53	49	47	44	42	38	36	34				30	
4	76	65	58	52	69	61	54	49	51	46	43	43	39	36	35	32	30				27	
5	70	59	51	45	64	54	48	43	46	41	37	39	35	32	32	29	27				24	
6	64	53	45	40	59	49	43	38	42	37	33	36	32	29	29	27	24				22	
7	60	48	41	35	55	45	38	34	39	33	30	33	29	26	27	24	22				20	
8	56	44	37	32	51	41	35	30	35	30	27	30	26	23	25	22	20				18	
9	52	41	33	29	48	38	31	27	33	28	24	28	24	21	23	21	19				16	
10	49	37	30	26	45	35	29	25	30	25	22	26	22	20	22	19	17				15	

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

	0°	45°	90°	135°	180°
0°	16926	16926	16926	16926	16926
5°	20097	19457	17033	13769	12783
10°	18209	19762	16948	11032	9464
15°	12538	16945	16769	9016	7486
20°	8722	13046	16432	7602	6581
25°	6646	9943	15942	6758	6064
30°	5786	7950	15330	6274	5618
35°	5311	6706	14462	5867	5210
40°	4846	5989	13326	5467	4838
45°	4376	5477	12102	5089	4466
50°	3974	5052	10655	4717	4006
55°	3594	4641	9269	4356	3436
60°	3221	4219	8049	3955	3249
65°	2972	3744	6930	3556	3072
70°	2414	3235	6046	3216	2496
75°	2117	2574	5120	2670	2200
80°	1915	2176	4197	2238	2077
85°	1754	1914	3186	2025	1914

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 12769 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	143.3	3.1
10°-20°	331.7	7.2
20°-30°	380.5	8.3
30°-40°	375.1	8.2
40°-50°	330.8	7.2
50°-60°	254.5	5.5
60°-70°	167.3	3.6
70°-80°	81.3	1.8
80°-90°	22.3	0.5
90°-100°	180.4	3.9
100°-110°	528.3	11.5
110°-120°	515.9	11.2
120°-130°	410.9	9.0
130°-140°	324.2	7.1
140°-150°	241.8	5.3
150°-160°	168.6	3.7
160°-170°	99.0	2.2
170°-180°	32.2	0.7
0°-30°	855.5	18.6
0°-40°	1230.6	26.8
0°-60°	1815.9	39.6
0°-90°	2086.7	45.5
90°-120°	1224.6	26.7
90°-150°	2201.5	48.0
90°-180°	2501.0	54.5
0°-180°	4588.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1572	1572	1572	1572	1572	
5°	1860	1801	1576	1274	1183	170
15°	1125	1521	1505	809	672	318
25°	560	837	1342	569	511	264
35°	404	510	1101	446	396	252
45°	288	360	795	334	293	223
55°	192	247	494	232	183	172
65°	117	147	272	140	121	114
75°	51	62	123	64	53	55
85°	14	16	26	16	16	15
90°	20	17	1	17	20	11
95°	78	399	23	399	78	127
105°	856	541	78	541	856	854
115°	1041	414	138	414	1041	1016
125°	821	386	192	386	821	743
135°	666	381	225	381	666	516
145°	520	376	256	376	520	330
155°	432	364	292	364	432	201
165°	376	349	318	349	376	107
175°	339	335	332	335	339	33
180°	332	332	332	332	332	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5
2.5°	1742.7	1737.2	1731.7	1730.1	1728.5	1723.4	1718.2	1706.6	1695.0	1683.1	1671.1
5°	1860.0	1860.7	1861.3	1859.7	1858.1	1851.3	1844.6	1830.4	1816.2	1800.7	1785.3
7.5°	1823.9	1834.3	1844.6	1846.5	1848.4	1853.6	1858.8	1855.5	1852.3	1846.5	1840.7
10°	1666.0	1665.3	1664.7	1676.3	1687.9	1722.4	1756.9	1774.6	1792.3	1808.1	1823.9
12.5°	1408.1	1409.1	1410.0	1448.1	1486.1	1518.7	1551.2	1596.4	1641.5	1690.2	1738.8
15°	1125.1	1140.9	1156.6	1190.5	1224.3	1273.3	1322.3	1382.9	1443.6	1520.6	1597.6
17.5°	923.9	930.7	937.4	970.0	1002.6	1049.0	1095.4	1164.1	1232.7	1332.0	1431.3
20°	761.4	767.6	773.7	797.2	820.7	865.2	909.7	975.2	1040.6	1138.9	1237.2
22.5°	635.7	647.6	659.6	675.4	691.2	723.4	755.6	822.4	889.1	978.7	1068.3
25°	559.6	565.1	570.6	584.1	597.7	628.6	659.6	703.7	747.9	837.2	926.5
27.5°	508.0	509.7	511.3	521.3	531.3	551.2	571.2	612.2	653.1	726.6	800.1
30°	465.5	468.4	471.3	479.0	486.8	501.3	515.8	544.8	573.8	639.6	705.3
32.5°	432.6	434.2	435.8	442.3	448.7	459.4	470.0	492.9	515.8	566.1	616.4
35°	404.2	404.6	404.9	409.7	414.6	424.9	435.2	454.2	473.2	510.3	547.4
37.5°	372.0	374.3	376.5	380.1	383.6	392.6	401.7	417.1	432.6	463.2	493.9
40°	344.9	346.9	348.8	353.0	357.2	364.3	371.4	385.5	399.7	426.2	452.6
42.5°	317.9	319.1	320.4	324.6	328.8	337.5	346.2	357.5	368.8	390.7	412.6
45°	287.5	290.8	294.0	298.5	303.0	310.4	317.9	329.5	341.1	359.8	378.5
47.5°	262.4	264.0	265.6	269.5	273.4	282.4	291.4	301.7	312.0	329.5	346.9
50°	237.3	237.9	238.6	242.1	245.6	253.7	261.8	273.7	285.6	301.7	317.9
52.5°	213.4	215.0	216.6	220.2	223.7	229.2	234.7	246.9	259.2	275.0	290.8
55°	191.5	192.5	193.4	196.0	198.6	205.0	211.5	222.1	232.7	247.3	261.8
57.5°	170.9	172.1	173.4	175.4	177.3	183.1	188.9	198.3	207.6	222.1	236.6
60°	149.6	151.2	152.8	155.1	157.3	161.8	166.3	174.7	183.1	196.0	208.9
62.5°	134.1	134.4	134.7	136.7	138.6	141.8	145.1	151.8	158.6	171.5	184.4
65°	116.7	117.7	118.6	119.6	120.6	123.1	125.7	131.5	137.3	147.0	156.7
67.5°	98.6	99.6	100.6	102.2	103.8	106.1	108.3	112.2	116.1	125.1	134.1
70°	76.7	76.7	76.7	79.3	81.9	85.7	89.6	92.5	95.4	102.8	110.2
72.5°	62.5	62.9	63.2	63.5	63.8	66.1	68.3	73.2	78.0	82.5	87.0
75°	50.9	51.3	51.6	51.9	52.2	52.9	53.5	55.1	56.7	61.9	67.1
77.5°	40.6	40.9	41.3	41.6	41.9	42.6	43.2	43.8	44.5	46.4	48.4
80°	30.9	31.3	31.6	31.9	32.2	32.6	32.9	33.5	34.2	35.1	36.1
82.5°	22.6	22.6	22.6	22.6	22.6	23.2	23.9	23.9	23.9	24.5	25.1
85°	14.2	14.2	14.2	14.5	14.8	14.8	14.8	15.2	15.5	15.5	15.5
87.5°	6.4	6.1	5.8	6.1	6.4	6.4	6.4	6.8	7.1	7.1	7.1
90°	19.5	20.2	19.5	18.8	19.5	18.2	17.5	16.8	16.2	16.8	14.8
92.5°	35.7	37.0	36.3	39.0	40.4	45.1	51.8	66.6	93.6	125.2	138.7
95°	78.1	80.8	85.5	91.5	104.3	128.6	164.2	242.3	323.8	399.2	355.4
97.5°	160.2	167.6	183.8	209.3	254.4	331.2	420.0	556.7	634.8	613.9	458.4
100°	422.1	421.4	447.6	496.8	564.8	660.4	739.1	793.6	770.1	637.5	430.8
102.5°	668.4	688.0	708.8	745.2	794.3	846.1	883.8	872.4	776.8	593.7	390.4
105°	856.2	859.6	881.1	906.7	937.7	955.2	942.4	875.1	734.4	541.2	358.8
107.5°	978.8	986.2	994.9	1007.0	1011.1	992.9	940.4	834.7	673.8	494.8	335.9
110°	1048.8	1050.1	1051.5	1046.1	1027.2	980.1	895.3	771.4	617.3	456.4	323.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1062.9	1062.2	1055.5	1036.0	997.6	933.7	836.0	708.8	568.1	430.8	317.1
115°	1041.4	1038.0	1024.5	994.9	944.4	871.0	772.1	655.0	530.4	414.0	316.4
117.5°	994.2	989.5	969.3	936.3	883.8	807.8	716.9	613.2	505.5	402.5	317.1
120°	932.3	928.3	912.1	874.4	821.2	753.2	672.5	581.6	486.7	395.1	319.7
122.5°	874.4	869.0	850.9	817.9	772.1	710.2	636.8	556.7	471.2	390.4	324.5
125°	821.2	816.5	799.7	770.1	727.0	673.1	608.5	535.2	458.4	386.4	329.2
127.5°	775.5	771.4	755.9	730.4	691.3	641.5	582.3	515.6	446.3	384.4	334.6
130°	737.8	732.4	718.2	694.0	658.3	612.6	558.0	497.5	436.9	382.3	339.9
132.5°	700.7	697.4	685.3	661.0	628.0	585.0	535.2	480.6	428.1	381.7	344.0
135°	665.7	661.0	648.9	628.7	595.7	557.4	513.6	465.8	420.7	381.0	348.0
137.5°	628.7	624.7	614.6	593.7	565.4	531.1	492.1	451.7	414.0	379.7	350.7
140°	589.7	590.3	579.6	560.7	535.2	506.2	473.9	439.6	407.9	379.0	353.4
142.5°	553.3	554.0	544.6	528.4	507.6	483.3	456.4	428.1	402.5	377.6	355.4
145°	520.3	519.0	513.6	499.5	482.6	463.1	441.6	419.4	397.8	376.3	356.1
147.5°	492.1	491.4	486.0	475.9	462.5	448.3	430.1	412.0	393.1	374.3	356.1
150°	467.8	467.8	463.8	456.4	446.3	433.5	419.4	403.9	388.4	371.6	356.1
152.5°	447.6	447.6	445.6	438.9	431.5	421.4	409.3	396.5	383.0	368.2	354.1
155°	431.5	430.8	429.5	424.1	418.0	409.9	399.8	389.1	377.6	364.2	352.7
157.5°	416.0	416.0	414.7	410.6	405.2	398.5	390.4	381.0	371.6	360.8	350.7
160°	401.2	401.9	401.9	397.8	393.1	388.4	381.7	374.3	365.5	356.8	349.4
162.5°	387.7	388.4	388.4	385.0	382.3	378.3	372.2	366.2	359.5	352.7	346.7
165°	376.3	376.3	377.0	374.3	371.6	368.2	363.5	359.5	354.1	348.7	344.0
167.5°	364.8	364.8	365.5	363.5	362.2	359.5	356.8	353.4	348.7	344.7	341.3
170°	354.7	354.7	355.4	354.1	353.4	352.1	349.4	347.3	344.0	340.6	338.6
172.5°	345.3	346.0	347.3	346.0	346.0	345.3	343.3	342.0	339.3	337.2	336.6
175°	338.6	339.3	339.9	339.3	339.3	339.3	337.9	337.2	335.9	334.6	334.6
177.5°	333.9	333.9	335.2	334.6	335.2	335.2	334.6	333.9	333.2	332.5	333.2
180°	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5
2.5°	1669.5	1667.9	1652.4	1637.0	1621.8	1606.7	1595.4	1584.1	1565.1	1546.1	1534.1
5°	1773.0	1760.8	1736.3	1711.8	1675.0	1638.3	1607.3	1576.4	1537.0	1497.7	1464.8
7.5°	1830.7	1820.7	1791.1	1761.4	1712.7	1664.0	1615.7	1567.3	1509.3	1451.3	1401.6
10°	1832.3	1840.7	1816.2	1791.7	1736.9	1682.1	1616.3	1550.6	1472.6	1394.6	1330.4
12.5°	1774.9	1811.0	1805.9	1800.7	1745.0	1689.2	1609.2	1529.3	1433.6	1337.8	1257.5
15°	1667.6	1737.5	1758.2	1778.8	1732.7	1686.6	1595.7	1504.8	1392.3	1279.8	1187.6
17.5°	1529.3	1627.3	1681.8	1736.3	1702.7	1669.2	1569.6	1470.0	1343.3	1216.6	1116.4
20°	1365.5	1493.8	1579.3	1664.7	1652.4	1640.2	1537.4	1434.5	1297.8	1161.2	1052.5
22.5°	1203.7	1339.1	1457.1	1575.1	1587.6	1600.2	1496.4	1392.6	1243.0	1093.5	982.9
25°	1064.1	1201.8	1342.3	1482.9	1511.2	1539.6	1441.0	1342.3	1187.3	1032.2	922.3
27.5°	931.0	1061.9	1216.6	1371.3	1422.9	1474.5	1384.2	1294.0	1132.5	971.0	861.4
30°	822.4	939.4	1097.3	1255.3	1327.2	1399.1	1316.2	1233.4	1073.2	912.9	805.6
32.5°	721.1	825.9	984.5	1143.1	1226.6	1310.1	1238.5	1167.0	1012.9	858.8	752.7
35°	641.2	735.0	883.0	1030.9	1124.4	1217.9	1159.2	1100.6	950.0	799.5	699.2
37.5°	572.5	651.2	790.1	929.1	1028.3	1127.6	1078.6	1029.6	888.1	746.6	651.8
40°	515.8	579.0	708.2	837.5	934.9	1032.2	990.3	948.4	821.7	695.0	606.4
42.5°	467.1	521.6	637.6	753.7	843.0	932.3	904.6	876.8	762.1	647.3	565.1
45°	424.2	470.0	572.2	674.4	756.6	838.8	816.9	795.0	696.0	597.0	521.6
47.5°	386.2	425.5	516.8	608.0	681.8	755.6	735.3	715.0	633.1	551.2	482.6
50°	351.4	384.9	461.0	537.1	603.5	669.9	653.1	636.3	568.7	501.0	441.6
52.5°	318.5	346.2	414.6	482.9	536.4	589.9	577.0	564.1	511.9	459.7	405.9
55°	287.2	312.7	370.4	428.1	473.9	519.7	506.8	493.9	453.2	412.6	365.2
57.5°	258.9	281.1	327.8	374.6	411.0	447.4	441.3	435.2	401.3	367.5	328.5
60°	228.9	248.9	289.2	329.5	358.8	388.1	381.0	373.9	349.8	325.6	292.1
62.5°	202.1	219.9	252.1	284.3	308.2	332.0	326.9	321.7	303.3	285.0	257.2
65°	174.1	191.5	217.6	243.7	262.4	281.1	276.6	272.1	258.2	244.4	222.1
67.5°	148.6	163.1	185.7	208.2	220.8	233.4	230.8	228.2	217.6	207.0	189.6
70°	122.8	135.4	154.1	172.8	181.5	190.2	191.2	192.1	182.5	172.8	159.9
72.5°	97.0	107.0	124.4	141.8	148.6	155.4	155.1	154.7	148.9	143.1	131.5
75°	74.5	81.9	95.4	109.0	114.8	120.6	121.9	123.1	117.7	112.2	105.7
77.5°	53.5	58.7	69.0	79.3	85.7	92.2	92.8	93.5	90.9	88.3	82.2
80°	37.7	39.3	45.8	52.2	59.0	65.8	66.7	67.7	65.1	62.5	58.7
82.5°	26.1	27.1	29.3	31.6	37.1	42.6	43.8	45.1	43.8	42.6	38.4
85°	15.8	16.1	17.1	18.1	20.6	23.2	24.5	25.8	25.1	24.5	22.2
87.5°	7.1	7.1	7.4	7.7	8.4	9.0	10.6	12.2	11.3	10.3	9.3
90°	12.8	10.8	8.8	7.4	6.1	4.0	2.7	1.3	2.7	4.0	6.1
92.5°	103.7	68.0	46.4	34.3	27.6	21.5	14.8	10.1	14.8	21.5	27.6
95°	245.0	144.7	87.5	61.3	43.8	32.3	24.9	22.9	24.9	32.3	43.8
97.5°	272.6	156.2	99.6	70.7	53.2	43.1	37.0	36.3	37.0	43.1	53.2
100°	253.8	154.2	107.0	80.8	64.6	55.2	50.5	49.8	50.5	55.2	64.6
102.5°	237.6	156.8	115.8	92.2	78.1	69.3	65.3	63.9	65.3	69.3	78.1
105°	231.6	162.2	125.9	105.0	92.2	84.1	80.1	78.1	80.1	84.1	92.2
107.5°	230.2	171.0	138.7	119.1	107.0	99.0	94.9	92.9	94.9	99.0	107.0
110°	233.6	182.4	152.1	133.3	121.8	114.4	111.1	109.0	111.1	114.4	121.8





TEST NUMBER: P832298

CATALOG NUMBER: S123RDIP-S560D805U935-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	240.3	193.9	166.3	148.1	136.6	129.2	125.9	123.9	125.9	129.2	136.6
115°	247.7	206.7	181.1	162.9	151.5	144.7	140.7	138.0	140.7	144.7	151.5
117.5°	257.1	220.1	194.5	177.7	164.9	158.9	155.5	152.1	155.5	158.9	164.9
120°	267.9	232.9	208.7	191.8	179.1	172.3	169.0	166.9	169.0	172.3	179.1
122.5°	278.0	246.4	222.8	204.6	192.5	185.1	181.7	179.7	181.7	185.1	192.5
125°	288.8	259.2	235.6	217.4	204.6	197.2	193.2	191.8	193.2	197.2	204.6
127.5°	297.5	270.6	247.7	229.5	215.4	208.0	203.3	201.3	203.3	208.0	215.4
130°	306.3	280.7	258.5	240.3	226.2	218.1	212.0	210.0	212.0	218.1	226.2
132.5°	314.4	289.5	267.9	250.4	236.3	226.2	219.4	216.8	219.4	226.2	236.3
135°	321.1	298.2	277.3	259.2	245.0	234.9	227.5	224.8	227.5	234.9	245.0
137.5°	326.5	304.3	284.1	267.2	253.1	242.3	234.9	232.2	234.9	242.3	253.1
140°	330.5	310.3	290.8	274.0	260.5	249.7	243.0	239.6	243.0	249.7	260.5
142.5°	334.6	315.0	296.2	280.7	267.2	257.8	250.4	247.7	250.4	257.8	267.2
145°	337.2	319.1	301.6	286.1	274.6	264.5	258.5	256.5	258.5	264.5	274.6
147.5°	339.3	322.4	306.3	292.8	281.4	272.6	266.6	265.2	266.6	272.6	281.4
150°	339.9	325.8	310.3	298.2	288.8	280.0	274.6	274.0	274.6	280.0	288.8
152.5°	341.3	327.8	315.0	303.6	295.5	288.1	282.7	282.7	282.7	288.1	295.5
155°	341.3	330.5	319.1	309.6	302.2	295.5	291.5	291.5	291.5	295.5	302.2
157.5°	342.0	331.9	322.4	315.0	308.3	302.2	298.9	298.2	298.9	302.2	308.3
160°	342.0	333.9	325.8	319.1	314.4	309.0	306.3	306.3	306.3	309.0	314.4
162.5°	341.3	334.6	327.8	322.4	318.4	314.4	312.3	312.3	312.3	314.4	318.4
165°	339.9	335.2	329.8	325.1	322.4	319.1	317.7	318.4	317.7	319.1	322.4
167.5°	339.3	335.2	331.2	327.8	325.8	323.1	322.4	323.1	322.4	323.1	325.8
170°	337.2	334.6	331.2	329.8	328.5	326.5	325.8	327.1	325.8	326.5	328.5
172.5°	336.6	334.6	331.9	331.2	330.5	329.2	329.2	329.8	329.2	329.2	330.5
175°	335.2	333.9	332.5	331.9	331.9	330.5	331.2	331.9	331.2	330.5	331.9
177.5°	334.6	333.2	332.5	332.5	332.5	331.9	332.5	333.2	332.5	331.9	332.5
180°	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5



TEST NUMBER: P832298

CATALOG NUMBER: S123RDIP-S560D805U935-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5
2.5°	1522.2	1503.8	1485.5	1472.2	1459.0	1442.6	1426.1	1425.5	1424.9	1412.6	1400.4
5°	1431.9	1400.0	1368.1	1336.8	1305.6	1274.3	1243.0	1235.9	1228.9	1218.2	1207.6
7.5°	1352.0	1301.1	1250.1	1210.2	1170.2	1138.9	1107.6	1086.4	1065.1	1048.7	1032.2
10°	1266.3	1203.1	1139.9	1091.5	1043.2	1009.3	975.5	951.0	926.5	914.9	903.3
12.5°	1177.3	1108.6	1039.9	992.6	945.2	904.6	863.9	841.7	819.5	803.3	787.2
15°	1095.4	1021.6	947.8	897.5	847.2	809.1	771.1	748.9	726.6	710.5	694.4
17.5°	1016.1	941.6	867.2	816.2	765.3	730.8	696.3	674.7	653.1	643.1	633.1
20°	943.9	868.8	793.7	745.6	697.6	663.7	629.9	618.3	606.7	597.3	588.0
22.5°	872.3	800.1	727.9	681.8	635.7	611.2	586.7	577.4	568.0	560.9	553.8
25°	812.4	740.5	668.6	628.3	588.0	569.0	550.0	543.8	537.7	530.6	523.5
27.5°	751.8	683.4	615.1	582.8	550.6	535.1	519.7	511.9	504.2	498.4	492.6
30°	698.2	635.1	571.9	545.1	518.4	504.8	491.3	482.9	474.5	469.0	463.6
32.5°	646.7	590.6	534.5	511.6	488.7	475.5	462.3	454.2	446.2	439.7	433.3
35°	599.0	550.3	501.6	480.6	459.7	446.5	433.3	425.2	417.1	410.7	404.2
37.5°	557.0	512.9	468.7	449.1	429.4	417.8	406.2	397.8	389.4	382.6	375.9
40°	517.7	478.7	439.7	420.7	401.7	389.1	376.5	369.1	361.7	355.6	349.4
42.5°	482.9	447.1	411.3	392.6	373.9	362.0	350.1	341.4	332.7	329.1	325.6
45°	446.2	414.6	383.0	364.9	346.9	334.3	321.7	314.3	306.9	303.7	300.4
47.5°	413.9	384.6	355.2	337.5	319.8	308.5	297.2	291.4	285.6	281.1	276.6
50°	382.3	354.0	325.6	308.5	291.4	281.7	272.1	265.0	257.9	254.7	251.4
52.5°	352.0	326.2	300.4	283.0	265.6	256.3	246.9	240.8	234.7	227.9	221.1
55°	317.9	295.3	272.7	257.2	241.8	232.1	222.4	215.3	208.2	201.2	194.1
57.5°	289.5	267.2	245.0	231.1	217.3	207.9	198.6	190.8	183.1	177.3	171.5
60°	258.5	239.2	219.9	206.3	192.8	183.7	174.7	167.3	159.9	157.0	154.1
62.5°	229.5	211.5	193.4	181.5	169.6	160.9	152.2	147.3	142.5	140.6	138.6
65°	199.9	184.4	168.9	158.0	147.0	139.6	132.2	129.9	127.7	126.0	124.4
67.5°	172.1	158.9	145.7	136.0	126.4	121.2	116.1	113.5	110.9	109.0	107.0
70°	147.0	135.4	123.8	115.4	107.0	102.2	97.4	95.1	92.8	89.3	85.7
72.5°	119.9	110.9	101.9	95.4	89.0	84.8	80.6	76.1	71.6	68.3	65.1
75°	99.3	90.3	81.2	75.1	69.0	64.2	59.3	57.7	56.1	55.1	54.2
77.5°	76.1	68.3	60.6	55.8	50.9	48.7	46.4	45.5	44.5	44.2	43.8
80°	54.8	48.4	41.9	39.3	36.7	36.1	35.5	34.8	34.2	33.8	33.5
82.5°	34.2	30.9	27.7	27.1	26.4	26.1	25.8	25.5	25.1	24.8	24.5
85°	20.0	18.7	17.4	17.1	16.8	16.4	16.1	16.1	16.1	16.1	16.1
87.5°	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.1	7.7
90°	7.4	8.8	10.8	12.8	14.8	16.8	16.2	16.8	17.5	18.2	19.5
92.5°	34.3	46.4	68.0	103.7	138.7	125.2	93.6	66.6	51.8	45.1	40.4
95°	61.3	87.5	144.7	245.0	355.4	399.2	323.8	242.3	164.2	128.6	104.3
97.5°	70.7	99.6	156.2	272.6	458.4	613.9	634.8	556.7	420.0	331.2	254.4
100°	80.8	107.0	154.2	253.8	430.8	637.5	770.1	793.6	739.1	660.4	564.8
102.5°	92.2	115.8	156.8	237.6	390.4	593.7	776.8	872.4	883.8	846.1	794.3
105°	105.0	125.9	162.2	231.6	358.8	541.2	734.4	875.1	942.4	955.2	937.7
107.5°	119.1	138.7	171.0	230.2	335.9	494.8	673.8	834.7	940.4	992.9	1011.1
110°	133.3	152.1	182.4	233.6	323.8	456.4	617.3	771.4	895.3	980.1	1027.2



TEST NUMBER: P832298

CATALOG NUMBER: S123RDIP-S560D805U935-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	148.1	166.3	193.9	240.3	317.1	430.8	568.1	708.8	836.0	933.7	997.6
115°	162.9	181.1	206.7	247.7	316.4	414.0	530.4	655.0	772.1	871.0	944.4
117.5°	177.7	194.5	220.1	257.1	317.1	402.5	505.5	613.2	716.9	807.8	883.8
120°	191.8	208.7	232.9	267.9	319.7	395.1	486.7	581.6	672.5	753.2	821.2
122.5°	204.6	222.8	246.4	278.0	324.5	390.4	471.2	556.7	636.8	710.2	772.1
125°	217.4	235.6	259.2	288.8	329.2	386.4	458.4	535.2	608.5	673.1	727.0
127.5°	229.5	247.7	270.6	297.5	334.6	384.4	446.3	515.6	582.3	641.5	691.3
130°	240.3	258.5	280.7	306.3	339.9	382.3	436.9	497.5	558.0	612.6	658.3
132.5°	250.4	267.9	289.5	314.4	344.0	381.7	428.1	480.6	535.2	585.0	628.0
135°	259.2	277.3	298.2	321.1	348.0	381.0	420.7	465.8	513.6	557.4	595.7
137.5°	267.2	284.1	304.3	326.5	350.7	379.7	414.0	451.7	492.1	531.1	565.4
140°	274.0	290.8	310.3	330.5	353.4	379.0	407.9	439.6	473.9	506.2	535.2
142.5°	280.7	296.2	315.0	334.6	355.4	377.6	402.5	428.1	456.4	483.3	507.6
145°	286.1	301.6	319.1	337.2	356.1	376.3	397.8	419.4	441.6	463.1	482.6
147.5°	292.8	306.3	322.4	339.3	356.1	374.3	393.1	412.0	430.1	448.3	462.5
150°	298.2	310.3	325.8	339.9	356.1	371.6	388.4	403.9	419.4	433.5	446.3
152.5°	303.6	315.0	327.8	341.3	354.1	368.2	383.0	396.5	409.3	421.4	431.5
155°	309.6	319.1	330.5	341.3	352.7	364.2	377.6	389.1	399.8	409.9	418.0
157.5°	315.0	322.4	331.9	342.0	350.7	360.8	371.6	381.0	390.4	398.5	405.2
160°	319.1	325.8	333.9	342.0	349.4	356.8	365.5	374.3	381.7	388.4	393.1
162.5°	322.4	327.8	334.6	341.3	346.7	352.7	359.5	366.2	372.2	378.3	382.3
165°	325.1	329.8	335.2	339.9	344.0	348.7	354.1	359.5	363.5	368.2	371.6
167.5°	327.8	331.2	335.2	339.3	341.3	344.7	348.7	353.4	356.8	359.5	362.2
170°	329.8	331.2	334.6	337.2	338.6	340.6	344.0	347.3	349.4	352.1	353.4
172.5°	331.2	331.9	334.6	336.6	336.6	337.2	339.3	342.0	343.3	345.3	346.0
175°	331.9	332.5	333.9	335.2	334.6	334.6	335.9	337.2	337.9	339.3	339.3
177.5°	332.5	332.5	333.2	334.6	333.2	332.5	333.2	333.9	334.6	335.2	335.2
180°	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5



TEST NUMBER: P832298

CATALOG NUMBER: S123RDIP-S560D805U935-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1572.5	1572.5	1572.5	1572.5
2.5°	1397.1	1393.9	1392.6	1391.3
5°	1197.6	1187.6	1185.3	1183.1
7.5°	1028.0	1023.8	1010.0	996.1
10°	890.4	877.5	871.7	865.9
12.5°	775.3	763.4	761.4	759.5
15°	686.0	677.6	674.7	671.8
17.5°	627.3	621.5	618.0	614.4
20°	583.8	579.6	577.0	574.5
22.5°	550.6	547.4	545.4	543.5
25°	518.7	513.8	512.2	510.6
27.5°	488.4	484.2	482.6	481.0
30°	460.0	456.5	454.2	452.0
32.5°	429.1	424.9	423.6	422.3
35°	401.7	399.1	397.8	396.5
37.5°	372.7	369.4	367.5	365.6
40°	347.8	346.2	345.3	344.3
42.5°	322.7	319.8	319.5	319.1
45°	297.5	294.6	294.0	293.4
47.5°	274.0	271.4	271.1	270.8
50°	247.9	244.4	241.8	239.2
52.5°	217.9	214.7	212.4	210.2
55°	190.5	187.0	185.0	183.1
57.5°	169.9	168.3	167.3	166.3
60°	153.1	152.2	151.5	150.9
62.5°	137.6	136.7	136.7	136.7
65°	123.5	122.5	121.5	120.6
67.5°	105.1	103.2	102.8	102.5
70°	82.8	79.9	79.6	79.3
72.5°	64.8	64.5	63.8	63.2
75°	53.5	52.9	52.9	52.9
77.5°	43.2	42.6	42.6	42.6
80°	33.2	32.9	33.2	33.5
82.5°	24.5	24.5	24.2	23.9
85°	15.8	15.5	15.5	15.5
87.5°	7.7	7.7	7.7	7.7
90°	18.8	19.5	20.2	19.5
92.5°	39.0	36.3	37.0	35.7
95°	91.5	85.5	80.8	78.1
97.5°	209.3	183.8	167.6	160.2
100°	496.8	447.6	421.4	422.1
102.5°	745.2	708.8	688.0	668.4
105°	906.7	881.1	859.6	856.2
107.5°	1007.0	994.9	986.2	978.8
110°	1046.1	1051.5	1050.1	1048.8



TEST NUMBER: P832298

CATALOG NUMBER: S123RDIP-S560D805U935-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	1036.0	1055.5	1062.2	1062.9
115°	994.9	1024.5	1038.0	1041.4
117.5°	936.3	969.3	989.5	994.2
120°	874.4	912.1	928.3	932.3
122.5°	817.9	850.9	869.0	874.4
125°	770.1	799.7	816.5	821.2
127.5°	730.4	755.9	771.4	775.5
130°	694.0	718.2	732.4	737.8
132.5°	661.0	685.3	697.4	700.7
135°	628.7	648.9	661.0	665.7
137.5°	593.7	614.6	624.7	628.7
140°	560.7	579.6	590.3	589.7
142.5°	528.4	544.6	554.0	553.3
145°	499.5	513.6	519.0	520.3
147.5°	475.9	486.0	491.4	492.1
150°	456.4	463.8	467.8	467.8
152.5°	438.9	445.6	447.6	447.6
155°	424.1	429.5	430.8	431.5
157.5°	410.6	414.7	416.0	416.0
160°	397.8	401.9	401.9	401.2
162.5°	385.0	388.4	388.4	387.7
165°	374.3	377.0	376.3	376.3
167.5°	363.5	365.5	364.8	364.8
170°	354.1	355.4	354.7	354.7
172.5°	346.0	347.3	346.0	345.3
175°	339.3	339.9	339.3	338.6
177.5°	334.6	335.2	333.9	333.9
180°	332.5	332.5	332.5	332.5



TEST NUMBER: P832298

CATALOG NUMBER: S123RDIP-S560D805U935-4F0-1E-UDD-G4

**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	10.13	10.91	11.14	11.92	13.26	14.80	15.57	15.80	16.58	17.92
	3H	11.35	12.04	12.37	13.06	14.42	16.29	16.98	17.31	18.00	19.36
	4H	11.73	12.38	12.76	13.41	14.77	16.78	17.43	17.81	18.45	19.82
	6H	12.01	12.61	13.05	13.64	15.01	17.09	17.69	18.13	18.72	20.09
	8H	12.09	12.67	13.14	13.71	15.08	17.17	17.74	18.21	18.78	20.15
	12H	12.14	12.69	13.19	13.72	15.12	17.20	17.74	18.24	18.77	20.17
4H	2H	10.85	11.50	11.89	12.53	13.89	14.79	15.44	15.82	16.46	17.83
	3H	12.21	12.76	13.26	13.81	15.19	16.44	16.98	17.48	18.03	19.41
	4H	12.67	13.17	13.72	14.21	15.61	17.04	17.54	18.09	18.58	19.98
	6H	13.03	13.46	14.09	14.52	15.92	17.48	17.91	18.54	18.97	20.37
	8H	13.16	13.55	14.21	14.61	16.02	17.61	18.01	18.67	19.06	20.48
	12H	13.23	13.59	14.31	14.66	16.08	17.67	18.03	18.74	19.10	20.52
8H	4H	12.98	13.38	14.04	14.43	15.85	17.01	17.40	18.07	18.46	19.87
	6H	13.44	13.77	14.52	14.87	16.28	17.50	17.83	18.58	18.93	20.34
	8H	13.63	13.92	14.72	15.00	16.43	17.69	17.97	18.78	19.06	20.49
	12H	13.77	14.02	14.86	15.10	16.57	17.80	18.05	18.89	19.13	20.60
12H	4H	12.99	13.35	14.06	14.42	15.83	16.95	17.31	18.03	18.38	19.80
	6H	13.50	13.79	14.59	14.87	16.30	17.48	17.76	18.57	18.85	20.28
	8H	13.71	13.97	14.81	15.04	16.51	17.67	17.92	18.76	19.00	20.47