

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: P832223

Luminaire Tested: S123RDIP-S560D1195U950-4F0-1E-UDD-G4

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P832223  
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-S560D1195U950-4F0-1E-UDD-G4  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 560 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 1195 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: -

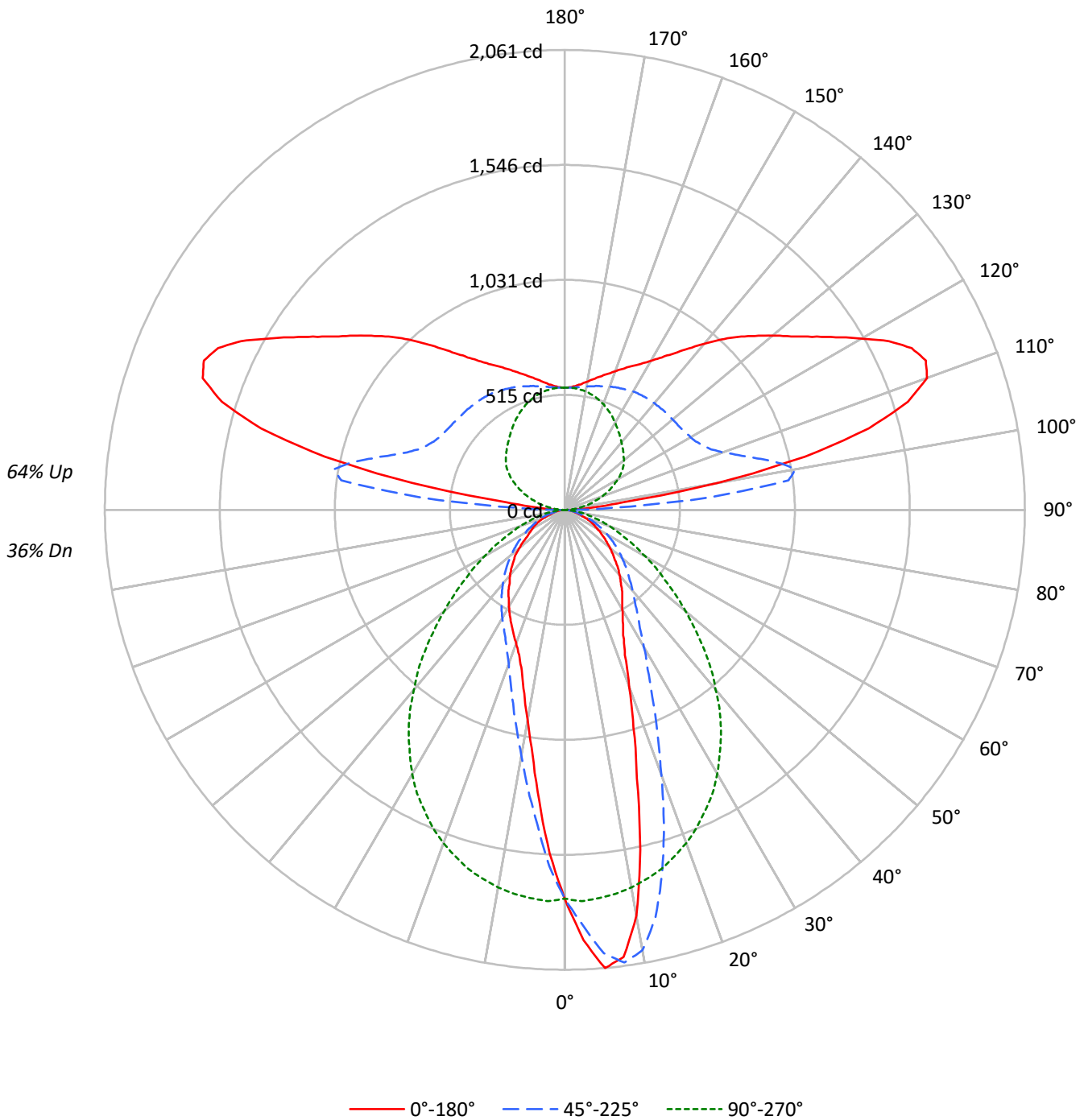
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6431.9 lumens  
Efficiency: N/A  
Efficacy: 127.1 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: Semi-Indirect  
  
Input Watts (W): 50.6  
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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CATALOG NUMBER: S123RDIP-S560D1195U950-4F0-1E-UDD-G4

### 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	104	104	104	104	94	94	94	94	76	76	76	59	59	59	43	43	43	36				
1	95	91	88	84	86	83	80	77	67	65	63	52	51	50	39	38	38	31				
2	87	80	75	70	79	73	68	64	59	56	53	47	45	43	35	34	33	27				
3	80	71	64	59	72	65	59	54	53	49	45	42	39	37	32	30	28	24				
4	73	63	56	50	66	58	51	47	47	43	39	38	35	32	29	27	25	21				
5	68	57	49	44	61	52	45	40	43	38	34	34	31	28	26	24	22	19				
6	62	51	44	38	57	47	40	35	39	34	30	31	28	25	24	22	20	17				
7	58	46	39	34	52	43	36	31	35	30	27	29	25	23	22	20	18	15				
8	54	42	35	30	49	39	32	28	32	28	24	26	23	20	21	18	17	14				
9	50	39	32	27	46	36	29	25	30	25	22	24	21	18	19	17	15	13				
10	47	36	29	24	43	33	27	23	28	23	20	23	19	17	18	16	14	12				

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

	0°	45°	90°	135°	180°
0°	18755	18755	18755	18755	18755
5°	22269	21558	18872	15257	14164
10°	20176	21898	18779	12223	10486
15°	13892	18775	18580	9990	8295
20°	9664	14455	18207	8424	7291
25°	7365	11017	17664	7487	6720
30°	6411	8809	16986	6953	6224
35°	5886	7430	16023	6501	5773
40°	5370	6635	14765	6058	5361
45°	4850	6068	13408	5638	4947
50°	4402	5598	11807	5228	4438
55°	3982	5142	10269	4827	3808
60°	3567	4676	8919	4383	3599
65°	3293	4149	7679	3940	3403
70°	2675	3585	6700	3563	2766
75°	2346	2853	5673	2957	2437
80°	2126	2411	4649	2479	2300
85°	1939	2112	3532	2248	2112

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 14148 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	158.8	2.5
10°-20°	367.5	5.7
20°-30°	421.6	6.6
30°-40°	415.6	6.5
40°-50°	366.5	5.7
50°-60°	282.0	4.4
60°-70°	185.4	2.9
70°-80°	90.0	1.4
80°-90°	25.7	0.4
90°-100°	297.1	4.6
100°-110°	869.9	13.5
110°-120°	849.5	13.2
120°-130°	676.5	10.5
130°-140°	533.8	8.3
140°-150°	398.2	6.2
150°-160°	277.6	4.3
160°-170°	163.1	2.5
170°-180°	53.0	0.8
0°-30°	947.9	14.7
0°-40°	1363.5	21.2
0°-60°	2012.0	31.3
0°-90°	2313.1	36.0
90°-120°	2016.5	31.4
90°-150°	3625.0	56.4
90°-180°	4119.0	64.0
0°-180°	6431.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1742	1742	1742	1742	1742	
5°	2061	1995	1747	1412	1311	188
15°	1247	1685	1667	896	744	352
25°	620	928	1487	630	566	293
35°	448	565	1219	495	439	279
45°	319	399	881	370	325	247
55°	212	274	547	257	203	190
65°	129	163	302	155	134	127
75°	56	69	136	71	59	61
85°	16	17	29	18	17	17
90°	32	28	2	28	32	18
95°	129	657	38	657	129	209
105°	1410	891	129	891	1410	1407
115°	1715	682	227	682	1715	1672
125°	1352	636	316	636	1352	1224
135°	1096	627	370	627	1096	850
145°	857	620	422	620	857	544
155°	710	600	480	600	710	331
165°	620	574	524	574	620	177
175°	558	551	546	551	558	54
180°	548	548	548	548	548	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4
2.5°	1930.9	1924.9	1918.8	1917.0	1915.2	1909.5	1903.8	1890.9	1878.1	1864.9	1851.7
5°	2061.0	2061.7	2062.4	2060.6	2058.8	2051.3	2043.8	2028.1	2012.4	1995.2	1978.1
7.5°	2021.0	2032.4	2043.8	2046.0	2048.1	2053.8	2059.5	2056.0	2052.4	2046.0	2039.5
10°	1845.9	1845.2	1844.5	1857.4	1870.2	1908.4	1946.7	1966.3	1986.0	2003.5	2021.0
12.5°	1560.2	1561.3	1562.3	1604.5	1646.6	1682.7	1718.8	1768.8	1818.8	1872.7	1926.7
15°	1246.6	1264.1	1281.6	1319.1	1356.6	1410.9	1465.2	1532.3	1599.5	1684.8	1770.2
17.5°	1023.7	1031.2	1038.7	1074.8	1110.8	1162.3	1213.7	1289.8	1365.9	1475.9	1585.9
20°	843.7	850.5	857.2	883.3	909.4	958.7	1008.0	1080.5	1153.0	1261.9	1370.9
22.5°	704.4	717.6	730.8	748.3	765.8	801.5	837.2	911.2	985.1	1084.4	1183.7
25°	620.1	626.1	632.2	647.2	662.2	696.5	730.8	779.7	828.7	927.6	1026.6
27.5°	562.9	564.7	566.5	577.6	588.6	610.8	632.9	678.3	723.7	805.1	886.5
30°	515.8	519.0	522.2	530.8	539.4	555.4	571.5	603.6	635.8	708.7	781.5
32.5°	479.3	481.1	482.9	490.1	497.2	509.0	520.8	546.1	571.5	627.2	682.9
35°	447.9	448.3	448.6	454.0	459.3	470.8	482.2	503.3	524.3	565.4	606.5
37.5°	412.2	414.7	417.2	421.1	425.1	435.1	445.1	462.2	479.3	513.3	547.2
40°	382.2	384.3	386.5	391.1	395.8	403.6	411.5	427.2	442.9	472.2	501.5
42.5°	352.2	353.6	355.0	359.7	364.3	374.0	383.6	396.1	408.6	432.9	457.2
45°	318.6	322.2	325.8	330.8	335.8	344.0	352.2	365.0	377.9	398.6	419.3
47.5°	290.7	292.5	294.3	298.6	302.9	312.9	322.9	334.3	345.8	365.0	384.3
50°	262.9	263.6	264.3	268.2	272.2	281.1	290.0	303.3	316.5	334.3	352.2
52.5°	236.5	238.2	240.0	244.0	247.9	254.0	260.0	273.6	287.2	304.7	322.2
55°	212.2	213.2	214.3	217.2	220.0	227.2	234.3	246.1	257.9	274.0	290.0
57.5°	189.3	190.7	192.2	194.3	196.5	202.9	209.3	219.7	230.0	246.1	262.2
60°	165.7	167.5	169.3	171.8	174.3	179.3	184.3	193.6	202.9	217.2	231.5
62.5°	148.6	148.9	149.3	151.4	153.6	157.2	160.7	168.2	175.7	190.0	204.3
65°	129.3	130.4	131.4	132.5	133.6	136.4	139.3	145.7	152.2	162.9	173.6
67.5°	109.3	110.4	111.4	113.2	115.0	117.5	120.0	124.3	128.6	138.6	148.6
70°	85.0	85.0	85.0	87.9	90.7	95.0	99.3	102.5	105.7	113.9	122.2
72.5°	69.3	69.7	70.0	70.4	70.7	73.2	75.7	81.1	86.4	91.4	96.4
75°	56.4	56.8	57.1	57.5	57.9	58.6	59.3	61.1	62.9	68.6	74.3
77.5°	45.0	45.4	45.7	46.1	46.4	47.1	47.9	48.6	49.3	51.4	53.6
80°	34.3	34.6	35.0	35.4	35.7	36.1	36.4	37.1	37.9	38.9	40.0
82.5°	25.0	25.0	25.0	25.0	25.0	25.7	26.4	26.4	26.4	27.1	27.9
85°	15.7	15.7	15.7	16.1	16.4	16.4	16.4	16.8	17.1	17.1	17.1
87.5°	7.1	6.8	6.4	6.8	7.1	7.1	7.1	7.5	7.9	7.9	7.9
90°	32.1	33.3	32.1	31.0	32.1	29.9	28.8	27.7	26.6	27.7	24.4
92.5°	58.7	61.0	59.9	64.3	66.5	74.3	85.3	109.7	154.1	206.2	228.3
95°	128.6	133.0	140.8	150.7	171.8	211.7	270.5	399.0	533.1	657.3	585.2
97.5°	263.8	276.0	302.6	344.7	419.0	545.3	691.6	916.6	1045.2	1010.9	754.8
100°	695.0	693.9	737.1	818.0	929.9	1087.3	1217.0	1306.8	1268.0	1049.7	709.4
102.5°	1100.6	1132.8	1167.1	1227.0	1307.9	1393.3	1455.3	1436.5	1279.1	977.6	642.9
105°	1409.9	1415.4	1450.9	1493.0	1544.0	1572.8	1551.8	1440.9	1209.3	891.2	590.8
107.5°	1611.6	1623.8	1638.2	1658.2	1664.8	1634.9	1548.4	1374.4	1109.5	814.7	553.1
110°	1726.9	1729.1	1731.3	1722.5	1691.4	1613.8	1474.2	1270.2	1016.4	751.5	533.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1750.2	1749.1	1738.0	1705.8	1642.7	1537.4	1376.6	1167.1	935.5	709.4	522.1
115°	1714.7	1709.2	1687.0	1638.2	1555.1	1434.3	1271.3	1078.5	873.4	681.7	520.9
117.5°	1637.1	1629.4	1596.1	1541.8	1455.3	1330.1	1180.4	1009.8	832.4	662.8	522.1
120°	1535.1	1528.5	1501.9	1439.8	1352.3	1240.3	1107.3	957.7	801.4	650.6	526.5
122.5°	1439.8	1430.9	1401.0	1346.7	1271.3	1169.4	1048.5	916.6	775.9	642.9	534.3
125°	1352.3	1344.5	1316.8	1268.0	1197.1	1108.4	1002.0	881.2	754.8	636.2	542.0
127.5°	1276.9	1270.2	1244.7	1202.6	1138.3	1056.3	958.8	849.0	734.9	632.9	550.9
130°	1214.8	1205.9	1182.7	1142.8	1084.0	1008.6	918.9	819.1	719.4	629.6	559.7
132.5°	1153.8	1148.3	1128.4	1088.5	1034.1	963.2	881.2	791.4	704.9	628.5	566.4
135°	1096.2	1088.5	1068.5	1035.2	980.9	917.8	845.7	767.0	692.8	627.4	573.0
137.5°	1035.2	1028.6	1012.0	977.6	931.1	874.5	810.2	743.7	681.7	625.1	577.5
140°	971.0	972.1	954.3	923.3	881.2	833.5	780.3	723.8	671.7	624.0	581.9
142.5°	911.1	912.2	896.7	870.1	835.7	795.8	751.5	704.9	662.8	621.8	585.2
145°	856.8	854.6	845.7	822.4	794.7	762.6	727.1	690.5	655.1	619.6	586.3
147.5°	810.2	809.1	800.3	783.6	761.5	738.2	708.3	678.3	647.3	616.3	586.3
150°	770.3	770.3	763.7	751.5	734.9	713.8	690.5	665.0	639.5	611.8	586.3
152.5°	737.1	737.1	733.8	722.7	710.5	693.9	673.9	652.8	630.7	606.3	583.0
155°	710.5	709.4	707.2	698.3	688.3	675.0	658.4	640.7	621.8	599.6	580.8
157.5°	685.0	685.0	682.8	676.1	667.3	656.2	642.9	627.4	611.8	594.1	577.5
160°	660.6	661.7	661.7	655.1	647.3	639.5	628.5	616.3	601.9	587.5	575.3
162.5°	638.4	639.5	639.5	634.0	629.6	622.9	612.9	603.0	591.9	580.8	570.8
165°	619.6	619.6	620.7	616.3	611.8	606.3	598.5	591.9	583.0	574.2	566.4
167.5°	600.8	600.8	601.9	598.5	596.3	591.9	587.5	581.9	574.2	567.5	562.0
170°	584.1	584.1	585.2	583.0	581.9	579.7	575.3	571.9	566.4	560.9	557.5
172.5°	568.6	569.7	571.9	569.7	569.7	568.6	565.3	563.1	558.6	555.3	554.2
175°	557.5	558.6	559.7	558.6	558.6	558.6	556.4	555.3	553.1	550.9	550.9
177.5°	549.8	549.8	552.0	550.9	552.0	552.0	550.9	549.8	548.7	547.6	548.7
180°	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4
2.5°	1849.9	1848.1	1830.9	1813.8	1797.0	1780.2	1767.7	1755.2	1734.1	1713.1	1699.8
5°	1964.5	1950.9	1923.8	1896.7	1855.9	1815.2	1780.9	1746.6	1703.1	1659.5	1623.1
7.5°	2028.5	2017.4	1984.5	1951.7	1897.7	1843.8	1790.2	1736.6	1672.3	1608.1	1553.0
10°	2030.2	2039.5	2012.4	1985.2	1924.5	1863.8	1790.9	1718.1	1631.6	1545.2	1474.1
12.5°	1966.7	2006.7	2001.0	1995.2	1933.4	1871.7	1783.1	1694.5	1588.4	1482.3	1393.4
15°	1847.7	1925.2	1948.1	1971.0	1919.9	1868.8	1768.1	1667.3	1542.7	1418.0	1315.9
17.5°	1694.5	1803.1	1863.4	1923.8	1886.7	1849.5	1739.1	1628.8	1488.4	1348.0	1236.9
20°	1513.0	1655.2	1749.9	1844.5	1830.9	1817.4	1703.4	1589.5	1438.0	1286.6	1166.2
22.5°	1333.7	1483.8	1614.5	1745.2	1759.1	1773.1	1658.1	1543.0	1377.3	1211.6	1089.1
25°	1179.1	1331.6	1487.3	1643.1	1674.5	1705.9	1596.6	1487.3	1315.5	1143.7	1021.9
27.5°	1031.6	1176.6	1348.0	1519.5	1576.6	1633.8	1533.8	1433.7	1254.8	1075.8	954.4
30°	911.2	1040.8	1215.9	1390.9	1470.5	1550.2	1458.4	1366.6	1189.1	1011.6	892.6
32.5°	799.0	915.1	1090.8	1266.6	1359.1	1451.6	1372.3	1293.0	1122.3	951.5	834.0
35°	710.4	814.4	978.3	1142.3	1245.9	1349.4	1284.4	1219.4	1052.6	885.8	774.7
37.5°	634.4	721.5	875.5	1029.4	1139.4	1249.4	1195.1	1140.9	984.0	827.2	722.2
40°	571.5	641.5	784.7	928.0	1035.8	1143.7	1097.3	1050.8	910.5	770.1	671.9
42.5°	517.6	577.9	706.5	835.1	934.0	1033.0	1002.3	971.5	844.4	717.2	626.1
45°	470.1	520.8	634.0	747.2	838.3	929.4	905.1	880.8	771.2	661.5	577.9
47.5°	427.9	471.5	572.6	673.7	755.4	837.2	814.7	792.2	701.5	610.8	534.7
50°	389.3	426.5	510.8	595.1	668.7	742.2	723.7	705.1	630.1	555.1	489.3
52.5°	352.9	383.6	459.3	535.1	594.4	653.7	639.4	625.1	567.2	509.3	449.7
55°	318.3	346.5	410.4	474.3	525.1	575.8	561.5	547.2	502.2	457.2	404.7
57.5°	286.8	311.5	363.3	415.1	455.4	495.8	489.0	482.2	444.7	407.2	364.0
60°	253.6	275.7	320.4	365.0	397.5	430.1	422.2	414.3	387.5	360.8	323.6
62.5°	224.0	243.6	279.3	315.0	341.5	367.9	362.2	356.5	336.1	315.8	285.0
65°	192.9	212.2	241.1	270.0	290.7	311.5	306.5	301.5	286.1	270.7	246.1
67.5°	164.7	180.7	205.7	230.7	244.7	258.6	255.7	252.9	241.1	229.3	210.0
70°	136.1	150.0	170.7	191.5	201.1	210.7	211.8	212.9	202.2	191.5	177.2
72.5°	107.5	118.6	137.9	157.2	164.7	172.2	171.8	171.4	165.0	158.6	145.7
75°	82.5	90.7	105.7	120.7	127.2	133.6	135.0	136.4	130.4	124.3	117.2
77.5°	59.3	65.0	76.4	87.9	95.0	102.2	102.9	103.6	100.7	97.9	91.1
80°	41.8	43.6	50.7	57.9	65.4	72.9	73.9	75.0	72.2	69.3	65.0
82.5°	28.9	30.0	32.5	35.0	41.1	47.1	48.6	50.0	48.6	47.1	42.5
85°	17.5	17.9	18.9	20.0	22.9	25.7	27.1	28.6	27.9	27.1	24.6
87.5°	7.9	7.9	8.2	8.6	9.3	10.0	11.8	13.6	12.5	11.4	10.4
90°	21.1	17.7	14.4	12.2	10.0	6.7	4.4	2.2	4.4	6.7	10.0
92.5°	170.7	111.9	76.5	56.5	45.4	35.5	24.4	16.6	24.4	35.5	45.4
95°	403.5	238.3	144.1	100.9	72.0	53.2	41.0	37.7	41.0	53.2	72.0
97.5°	448.9	257.1	164.0	116.4	87.6	70.9	61.0	59.9	61.0	70.9	87.6
100°	417.9	253.8	176.2	133.0	106.4	90.9	83.1	82.0	83.1	90.9	106.4
102.5°	391.3	258.3	190.6	151.9	128.6	114.2	107.5	105.3	107.5	114.2	128.6
105°	381.3	267.1	207.3	172.9	151.9	138.6	131.9	128.6	131.9	138.6	151.9
107.5°	379.1	281.5	228.3	196.2	176.2	162.9	156.3	153.0	156.3	162.9	176.2
110°	384.6	300.4	250.5	219.5	200.6	188.4	182.9	179.6	182.9	188.4	200.6





TEST NUMBER: P832223

CATALOG NUMBER: S123RDIP-S560D1195U950-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	395.7	319.2	273.8	243.8	225.0	212.8	207.3	203.9	207.3	212.8	225.0
115°	407.9	340.3	298.2	268.2	249.4	238.3	231.7	227.2	231.7	238.3	249.4
117.5°	423.4	362.4	320.3	292.6	271.6	261.6	256.0	250.5	256.0	261.6	271.6
120°	441.1	383.5	343.6	315.9	294.8	283.8	278.2	274.9	278.2	283.8	294.8
122.5°	457.8	405.7	366.9	337.0	317.0	304.8	299.3	295.9	299.3	304.8	317.0
125°	475.5	426.7	387.9	358.0	337.0	324.8	318.1	315.9	318.1	324.8	337.0
127.5°	489.9	445.6	407.9	378.0	354.7	342.5	334.7	331.4	334.7	342.5	354.7
130°	504.3	462.2	425.6	395.7	372.4	359.1	349.1	345.8	349.1	359.1	372.4
132.5°	517.6	476.6	441.1	412.3	389.0	372.4	361.3	356.9	361.3	372.4	389.0
135°	528.7	491.0	456.7	426.7	403.5	386.8	374.6	370.2	374.6	386.8	403.5
137.5°	537.6	501.0	467.7	440.0	416.8	399.0	386.8	382.4	386.8	399.0	416.8
140°	544.2	511.0	478.8	451.1	429.0	411.2	400.1	394.6	400.1	411.2	429.0
142.5°	550.9	518.7	487.7	462.2	440.0	424.5	412.3	407.9	412.3	424.5	440.0
145°	555.3	525.4	496.6	471.1	452.2	435.6	425.6	422.3	425.6	435.6	452.2
147.5°	558.6	530.9	504.3	482.2	463.3	448.9	438.9	436.7	438.9	448.9	463.3
150°	559.7	536.5	511.0	491.0	475.5	461.1	452.2	451.1	452.2	461.1	475.5
152.5°	562.0	539.8	518.7	499.9	486.6	474.4	465.5	465.5	465.5	474.4	486.6
155°	562.0	544.2	525.4	509.9	497.7	486.6	479.9	479.9	479.9	486.6	497.7
157.5°	563.1	546.4	530.9	518.7	507.6	497.7	492.1	491.0	492.1	497.7	507.6
160°	563.1	549.8	536.5	525.4	517.6	508.8	504.3	504.3	504.3	508.8	517.6
162.5°	562.0	550.9	539.8	530.9	524.3	517.6	514.3	514.3	514.3	517.6	524.3
165°	559.7	552.0	543.1	535.4	530.9	525.4	523.2	524.3	523.2	525.4	530.9
167.5°	558.6	552.0	545.3	539.8	536.5	532.0	530.9	532.0	530.9	532.0	536.5
170°	555.3	550.9	545.3	543.1	540.9	537.6	536.5	538.7	536.5	537.6	540.9
172.5°	554.2	550.9	546.4	545.3	544.2	542.0	542.0	543.1	542.0	542.0	544.2
175°	552.0	549.8	547.6	546.4	546.4	544.2	545.3	546.4	545.3	544.2	546.4
177.5°	550.9	548.7	547.6	547.6	547.6	546.4	547.6	548.7	547.6	546.4	547.6
180°	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6



TEST NUMBER: P832223

CATALOG NUMBER: S123RDIP-S560D1195U950-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4
2.5°	1686.6	1666.3	1645.9	1631.3	1616.6	1598.4	1580.2	1579.5	1578.8	1565.2	1551.6
5°	1586.6	1551.3	1515.9	1481.2	1446.6	1412.0	1377.3	1369.5	1361.6	1349.8	1338.0
7.5°	1498.0	1441.6	1385.2	1340.9	1296.6	1261.9	1227.3	1203.7	1180.1	1161.9	1143.7
10°	1403.0	1333.0	1263.0	1209.4	1155.9	1118.3	1080.8	1053.7	1026.6	1013.7	1000.8
12.5°	1304.4	1228.4	1152.3	1099.8	1047.3	1002.3	957.3	932.6	908.0	890.1	872.2
15°	1213.7	1131.9	1050.1	994.4	938.7	896.5	854.4	829.7	805.1	787.2	769.4
17.5°	1125.8	1043.3	960.8	904.4	848.0	809.7	771.5	747.6	723.7	712.6	701.5
20°	1045.8	962.6	879.4	826.2	773.0	735.4	697.9	685.1	672.2	661.9	651.5
22.5°	966.5	886.5	806.5	755.4	704.4	677.2	650.1	639.7	629.4	621.5	613.6
25°	900.1	820.5	740.8	696.2	651.5	630.4	609.4	602.6	595.8	587.9	580.1
27.5°	833.0	757.2	681.5	645.8	610.1	592.9	575.8	567.2	558.6	552.2	545.8
30°	773.7	703.7	633.6	604.0	574.4	559.4	544.4	535.1	525.8	519.7	513.6
32.5°	716.5	654.4	592.2	566.9	541.5	526.8	512.2	503.3	494.3	487.2	480.1
35°	663.7	609.7	555.8	532.6	509.3	494.7	480.1	471.1	462.2	455.1	447.9
37.5°	617.2	568.3	519.3	497.6	475.8	462.9	450.1	440.8	431.5	424.0	416.5
40°	573.6	530.4	487.2	466.1	445.1	431.1	417.2	409.0	400.8	394.0	387.2
42.5°	535.1	495.4	455.8	435.1	414.3	401.1	387.9	378.3	368.6	364.7	360.8
45°	494.3	459.3	424.3	404.3	384.3	370.4	356.5	348.3	340.0	336.5	332.9
47.5°	458.6	426.1	393.6	374.0	354.3	341.8	329.3	322.9	316.5	311.5	306.5
50°	423.6	392.2	360.8	341.8	322.9	312.2	301.5	293.6	285.7	282.2	278.6
52.5°	390.0	361.5	332.9	313.6	294.3	284.0	273.6	266.8	260.0	252.5	245.0
55°	352.2	327.2	302.2	285.0	267.9	257.2	246.5	238.6	230.7	222.9	215.0
57.5°	320.8	296.1	271.5	256.1	240.7	230.4	220.0	211.5	202.9	196.5	190.0
60°	286.5	265.0	243.6	228.6	213.6	203.6	193.6	185.4	177.2	173.9	170.7
62.5°	254.3	234.3	214.3	201.1	187.9	178.2	168.6	163.2	157.9	155.7	153.6
65°	221.5	204.3	187.2	175.0	162.9	154.7	146.4	143.9	141.4	139.7	137.9
67.5°	190.7	176.1	161.4	150.7	140.0	134.3	128.6	125.7	122.9	120.7	118.6
70°	162.9	150.0	137.2	127.9	118.6	113.2	107.9	105.4	102.9	98.9	95.0
72.5°	132.9	122.9	112.9	105.7	98.6	93.9	89.3	84.3	79.3	75.7	72.2
75°	110.0	100.0	90.0	83.2	76.4	71.1	65.7	63.9	62.2	61.1	60.0
77.5°	84.3	75.7	67.2	61.8	56.4	53.9	51.4	50.4	49.3	48.9	48.6
80°	60.7	53.6	46.4	43.6	40.7	40.0	39.3	38.6	37.9	37.5	37.1
82.5°	37.9	34.3	30.7	30.0	29.3	28.9	28.6	28.2	27.9	27.5	27.1
85°	22.1	20.7	19.3	18.9	18.6	18.2	17.9	17.9	17.9	17.9	17.9
87.5°	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	8.9	8.6
90°	12.2	14.4	17.7	21.1	24.4	27.7	26.6	27.7	28.8	29.9	32.1
92.5°	56.5	76.5	111.9	170.7	228.3	206.2	154.1	109.7	85.3	74.3	66.5
95°	100.9	144.1	238.3	403.5	585.2	657.3	533.1	399.0	270.5	211.7	171.8
97.5°	116.4	164.0	257.1	448.9	754.8	1010.9	1045.2	916.6	691.6	545.3	419.0
100°	133.0	176.2	253.8	417.9	709.4	1049.7	1268.0	1306.8	1217.0	1087.3	929.9
102.5°	151.9	190.6	258.3	391.3	642.9	977.6	1279.1	1436.5	1455.3	1393.3	1307.9
105°	172.9	207.3	267.1	381.3	590.8	891.2	1209.3	1440.9	1551.8	1572.8	1544.0
107.5°	196.2	228.3	281.5	379.1	553.1	814.7	1109.5	1374.4	1548.4	1634.9	1664.8
110°	219.5	250.5	300.4	384.6	533.1	751.5	1016.4	1270.2	1474.2	1613.8	1691.4



TEST NUMBER: P832223

CATALOG NUMBER: S123RDIP-S560D1195U950-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	243.8	273.8	319.2	395.7	522.1	709.4	935.5	1167.1	1376.6	1537.4	1642.7
115°	268.2	298.2	340.3	407.9	520.9	681.7	873.4	1078.5	1271.3	1434.3	1555.1
117.5°	292.6	320.3	362.4	423.4	522.1	662.8	832.4	1009.8	1180.4	1330.1	1455.3
120°	315.9	343.6	383.5	441.1	526.5	650.6	801.4	957.7	1107.3	1240.3	1352.3
122.5°	337.0	366.9	405.7	457.8	534.3	642.9	775.9	916.6	1048.5	1169.4	1271.3
125°	358.0	387.9	426.7	475.5	542.0	636.2	754.8	881.2	1002.0	1108.4	1197.1
127.5°	378.0	407.9	445.6	489.9	550.9	632.9	734.9	849.0	958.8	1056.3	1138.3
130°	395.7	425.6	462.2	504.3	559.7	629.6	719.4	819.1	918.9	1008.6	1084.0
132.5°	412.3	441.1	476.6	517.6	566.4	628.5	704.9	791.4	881.2	963.2	1034.1
135°	426.7	456.7	491.0	528.7	573.0	627.4	692.8	767.0	845.7	917.8	980.9
137.5°	440.0	467.7	501.0	537.6	577.5	625.1	681.7	743.7	810.2	874.5	931.1
140°	451.1	478.8	511.0	544.2	581.9	624.0	671.7	723.8	780.3	833.5	881.2
142.5°	462.2	487.7	518.7	550.9	585.2	621.8	662.8	704.9	751.5	795.8	835.7
145°	471.1	496.6	525.4	555.3	586.3	619.6	655.1	690.5	727.1	762.6	794.7
147.5°	482.2	504.3	530.9	558.6	586.3	616.3	647.3	678.3	708.3	738.2	761.5
150°	491.0	511.0	536.5	559.7	586.3	611.8	639.5	665.0	690.5	713.8	734.9
152.5°	499.9	518.7	539.8	562.0	583.0	606.3	630.7	652.8	673.9	693.9	710.5
155°	509.9	525.4	544.2	562.0	580.8	599.6	621.8	640.7	658.4	675.0	688.3
157.5°	518.7	530.9	546.4	563.1	577.5	594.1	611.8	627.4	642.9	656.2	667.3
160°	525.4	536.5	549.8	563.1	575.3	587.5	601.9	616.3	628.5	639.5	647.3
162.5°	530.9	539.8	550.9	562.0	570.8	580.8	591.9	603.0	612.9	622.9	629.6
165°	535.4	543.1	552.0	559.7	566.4	574.2	583.0	591.9	598.5	606.3	611.8
167.5°	539.8	545.3	552.0	558.6	562.0	567.5	574.2	581.9	587.5	591.9	596.3
170°	543.1	545.3	550.9	555.3	557.5	560.9	566.4	571.9	575.3	579.7	581.9
172.5°	545.3	546.4	550.9	554.2	554.2	555.3	558.6	563.1	565.3	568.6	569.7
175°	546.4	547.6	549.8	552.0	550.9	550.9	553.1	555.3	556.4	558.6	558.6
177.5°	547.6	547.6	548.7	550.9	548.7	547.6	548.7	549.8	550.9	552.0	552.0
180°	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6



TEST NUMBER: P832223

CATALOG NUMBER: S123RDIP-S560D1195U950-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1742.4	1742.4	1742.4	1742.4
2.5°	1548.0	1544.5	1543.0	1541.6
5°	1326.9	1315.9	1313.4	1310.9
7.5°	1139.1	1134.4	1119.1	1103.7
10°	986.5	972.3	965.8	959.4
12.5°	859.0	845.8	843.7	841.5
15°	760.1	750.8	747.6	744.4
17.5°	695.1	688.7	684.7	680.8
20°	646.9	642.2	639.4	636.5
22.5°	610.1	606.5	604.4	602.2
25°	574.7	569.4	567.6	565.8
27.5°	541.1	536.5	534.7	532.9
30°	509.7	505.8	503.3	500.8
32.5°	475.4	470.8	469.3	467.9
35°	445.1	442.2	440.8	439.3
37.5°	412.9	409.3	407.2	405.0
40°	385.4	383.6	382.5	381.5
42.5°	357.5	354.3	354.0	353.6
45°	329.7	326.5	325.8	325.0
47.5°	303.6	300.8	300.4	300.0
50°	274.7	270.7	267.9	265.0
52.5°	241.5	237.9	235.4	232.9
55°	211.1	207.2	205.0	202.9
57.5°	188.2	186.5	185.4	184.3
60°	169.7	168.6	167.9	167.2
62.5°	152.5	151.4	151.4	151.4
65°	136.8	135.7	134.7	133.6
67.5°	116.4	114.3	113.9	113.6
70°	91.8	88.6	88.2	87.9
72.5°	71.8	71.4	70.7	70.0
75°	59.3	58.6	58.6	58.6
77.5°	47.9	47.1	47.1	47.1
80°	36.8	36.4	36.8	37.1
82.5°	27.1	27.1	26.8	26.4
85°	17.5	17.1	17.1	17.1
87.5°	8.6	8.6	8.6	8.6
90°	31.0	32.1	33.3	32.1
92.5°	64.3	59.9	61.0	58.7
95°	150.7	140.8	133.0	128.6
97.5°	344.7	302.6	276.0	263.8
100°	818.0	737.1	693.9	695.0
102.5°	1227.0	1167.1	1132.8	1100.6
105°	1493.0	1450.9	1415.4	1409.9
107.5°	1658.2	1638.2	1623.8	1611.6
110°	1722.5	1731.3	1729.1	1726.9



TEST NUMBER: P832223

CATALOG NUMBER: S123RDIP-S560D1195U950-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	1705.8	1738.0	1749.1	1750.2
115°	1638.2	1687.0	1709.2	1714.7
117.5°	1541.8	1596.1	1629.4	1637.1
120°	1439.8	1501.9	1528.5	1535.1
122.5°	1346.7	1401.0	1430.9	1439.8
125°	1268.0	1316.8	1344.5	1352.3
127.5°	1202.6	1244.7	1270.2	1276.9
130°	1142.8	1182.7	1205.9	1214.8
132.5°	1088.5	1128.4	1148.3	1153.8
135°	1035.2	1068.5	1088.5	1096.2
137.5°	977.6	1012.0	1028.6	1035.2
140°	923.3	954.3	972.1	971.0
142.5°	870.1	896.7	912.2	911.1
145°	822.4	845.7	854.6	856.8
147.5°	783.6	800.3	809.1	810.2
150°	751.5	763.7	770.3	770.3
152.5°	722.7	733.8	737.1	737.1
155°	698.3	707.2	709.4	710.5
157.5°	676.1	682.8	685.0	685.0
160°	655.1	661.7	661.7	660.6
162.5°	634.0	639.5	639.5	638.4
165°	616.3	620.7	619.6	619.6
167.5°	598.5	601.9	600.8	600.8
170°	583.0	585.2	584.1	584.1
172.5°	569.7	571.9	569.7	568.6
175°	558.6	559.7	558.6	557.5
177.5°	550.9	552.0	549.8	549.8
180°	547.6	547.6	547.6	547.6



TEST NUMBER: P832223

CATALOG NUMBER: S123RDIP-S560D1195U950-4F0-1E-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	9.45	10.16	10.53	11.23	12.70	14.11	14.83	15.19	15.90	17.36
	3H	10.66	11.30	11.75	12.38	13.86	15.60	16.24	16.69	17.32	18.80
	4H	11.04	11.64	12.14	12.72	14.21	16.09	16.69	17.19	17.77	19.26
	6H	11.31	11.87	12.42	12.95	14.45	16.39	16.95	17.50	18.03	19.53
	8H	11.40	11.93	12.51	13.03	14.52	16.47	17.00	17.58	18.10	19.59
	12H	11.45	11.95	12.56	13.04	14.56	16.50	17.00	17.61	18.09	19.61
4H	2H	10.16	10.76	11.26	11.84	13.33	14.09	14.70	15.20	15.78	17.27
	3H	11.52	12.02	12.63	13.13	14.63	15.74	16.24	16.85	17.35	18.85
	4H	11.97	12.43	13.08	13.53	15.05	16.34	16.80	17.46	17.90	19.42
	6H	12.33	12.72	13.45	13.85	15.36	16.78	17.17	17.90	18.29	19.80
	8H	12.45	12.82	13.58	13.94	15.46	16.91	17.27	18.03	18.39	19.91
	12H	12.52	12.86	13.66	13.98	15.52	16.96	17.29	18.10	18.42	19.95
8H	4H	12.27	12.64	13.40	13.76	15.28	16.30	16.67	17.42	17.79	19.31
	6H	12.73	13.04	13.88	14.19	15.72	16.80	17.10	17.94	18.26	19.78
	8H	12.93	13.19	14.08	14.33	15.87	16.98	17.25	18.13	18.38	19.93
	12H	13.06	13.30	14.22	14.43	16.01	17.09	17.33	18.24	18.46	20.04
12H	4H	12.28	12.61	13.42	13.74	15.27	16.25	16.58	17.39	17.71	19.24
	6H	12.79	13.06	13.94	14.19	15.74	16.77	17.03	17.92	18.17	19.72
	8H	13.01	13.24	14.16	14.37	15.95	16.96	17.19	18.11	18.32	19.90