

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: P832211

Luminaire Tested: S123RDIP-S560D1195U927-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P832211
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-S560D1195U927-4F0-1E-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

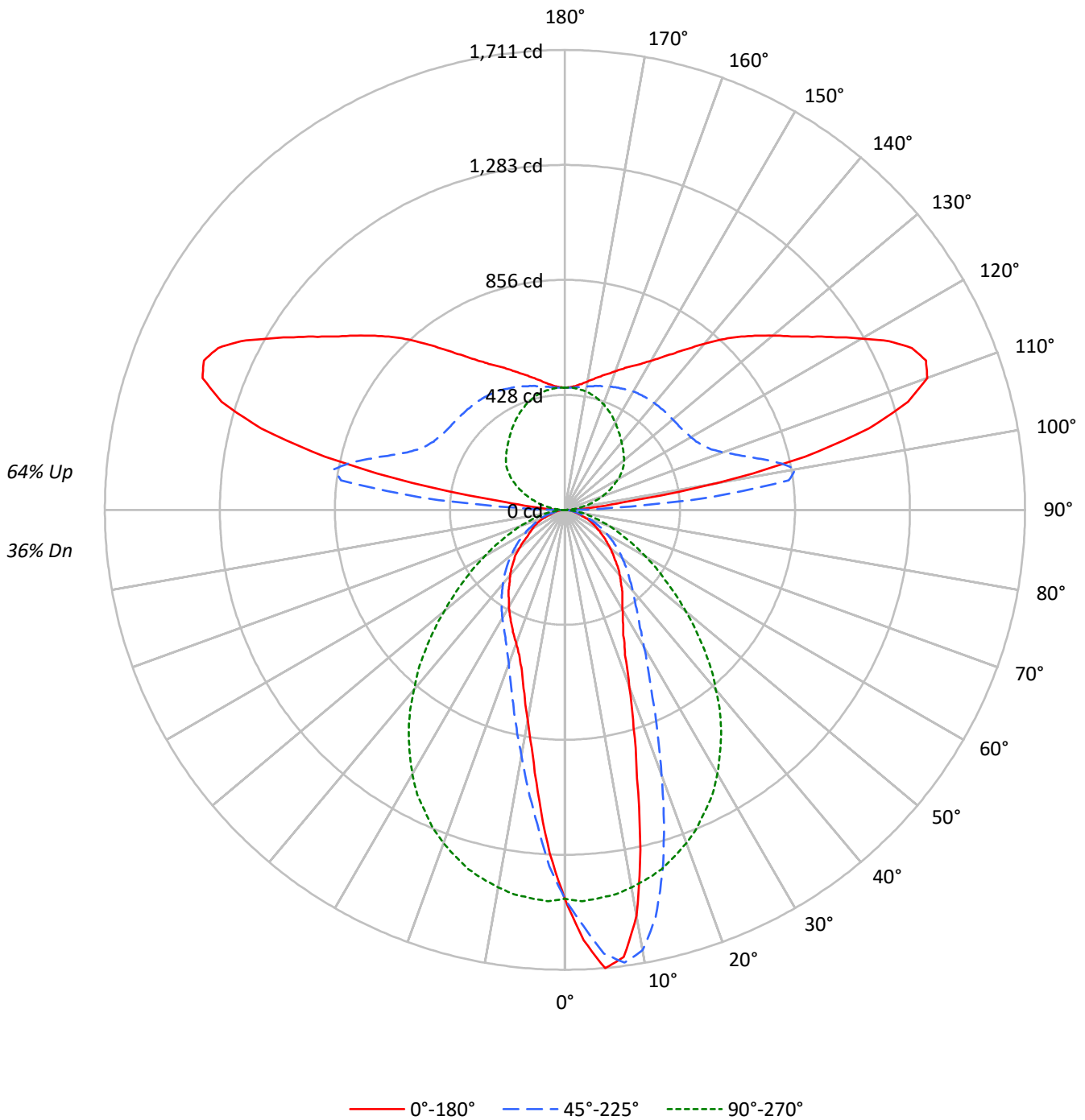
Lumens per Lamp: N/A
Luminaire Lumens: 5340.9 lumens
Efficiency: N/A
Efficacy: 105.6 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Indirect

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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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°	15573	15573	15573	15573	15573
5°	18492	17902	15672	12669	11761
10°	16753	18183	15593	10151	8708
15°	11535	15591	15428	8296	6888
20°	8025	12003	15119	6995	6054
25°	6115	9149	14668	6217	5580
30°	5323	7315	14105	5773	5168
35°	4887	6169	13306	5398	4794
40°	4460	5510	12261	5030	4451
45°	4028	5039	11134	4682	4109
50°	3656	4649	9805	4340	3686
55°	3307	4269	8527	4008	3162
60°	2962	3881	7408	3640	2988
65°	2735	3443	6375	3270	2825
70°	2222	2977	5564	2958	2297
75°	1951	2366	4712	2454	2021
80°	1767	2002	3862	2058	1909
85°	1618	1754	2927	1865	1754

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 11749 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.9	2.5
10°-20°	305.2	5.7
20°-30°	350.1	6.6
30°-40°	345.1	6.5
40°-50°	304.3	5.7
50°-60°	234.1	4.4
60°-70°	153.9	2.9
70°-80°	74.8	1.4
80°-90°	21.3	0.4
90°-100°	246.7	4.6
100°-110°	722.3	13.5
110°-120°	705.4	13.2
120°-130°	561.8	10.5
130°-140°	443.2	8.3
140°-150°	330.6	6.2
150°-160°	230.5	4.3
160°-170°	135.4	2.5
170°-180°	44.1	0.8
0°-30°	787.2	14.7
0°-40°	1132.3	21.2
0°-60°	1670.7	31.3
0°-90°	1920.7	36.0
90°-120°	1674.5	31.4
90°-150°	3010.1	56.4
90°-180°	3420.0	64.0
0°-180°	5340.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1447	1447	1447	1447	1447	
5°	1711	1657	1450	1172	1088	156
15°	1035	1399	1384	744	618	292
25°	515	770	1235	524	470	243
35°	372	470	1013	411	365	232
45°	265	331	731	308	270	205
55°	176	228	454	214	168	158
65°	107	135	250	128	111	105
75°	47	57	113	59	49	50
85°	13	14	24	15	14	14
90°	27	23	2	23	27	15
95°	107	546	31	546	107	174
105°	1171	740	107	740	1171	1168
115°	1424	566	189	566	1424	1388
125°	1123	528	262	528	1123	1016
135°	910	521	307	521	910	706
145°	712	514	351	514	712	452
155°	590	498	398	498	590	275
165°	514	477	435	477	514	147
175°	463	457	454	457	463	45
180°	455	455	455	455	455	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1446.8	1446.8	1446.8	1446.8	1446.8	1446.8	1446.8	1446.8	1446.8	1446.8	1446.8
2.5°	1603.4	1598.4	1593.3	1591.8	1590.4	1585.6	1580.9	1570.2	1559.5	1548.5	1537.6
5°	1711.4	1712.0	1712.6	1711.1	1709.6	1703.4	1697.1	1684.1	1671.0	1656.8	1642.6
7.5°	1678.2	1687.7	1697.1	1698.9	1700.7	1705.4	1710.2	1707.2	1704.3	1698.9	1693.6
10°	1532.8	1532.2	1531.6	1542.3	1553.0	1584.7	1616.5	1632.8	1649.1	1663.6	1678.2
12.5°	1295.5	1296.4	1297.3	1332.3	1367.3	1397.3	1427.2	1468.8	1510.3	1555.1	1599.9
15°	1035.1	1049.7	1064.2	1095.3	1126.5	1171.6	1216.7	1272.4	1328.2	1399.1	1469.9
17.5°	850.1	856.3	862.5	892.5	922.4	965.1	1007.8	1071.0	1134.2	1225.5	1316.9
20°	700.6	706.2	711.8	733.5	755.1	796.1	837.0	897.2	957.4	1047.9	1138.3
22.5°	584.9	595.9	606.8	621.4	635.9	665.6	695.2	756.6	818.0	900.5	982.9
25°	514.9	519.9	525.0	537.4	549.9	578.4	606.8	647.5	688.1	770.3	852.4
27.5°	467.4	468.9	470.4	479.6	488.8	507.2	525.6	563.2	600.9	668.5	736.2
30°	428.3	431.0	433.6	440.7	447.9	461.2	474.6	501.3	527.9	588.5	649.0
32.5°	398.0	399.5	401.0	406.9	412.9	422.7	432.4	453.5	474.6	520.8	567.1
35°	371.9	372.2	372.5	377.0	381.4	390.9	400.4	417.9	435.4	469.5	503.6
37.5°	342.3	344.4	346.4	349.7	353.0	361.3	369.6	383.8	398.0	426.2	454.4
40°	317.4	319.1	320.9	324.8	328.6	335.2	341.7	354.7	367.8	392.1	416.4
42.5°	292.4	293.6	294.8	298.7	302.5	310.5	318.5	328.9	339.3	359.5	379.6
45°	264.6	267.5	270.5	274.7	278.8	285.6	292.4	303.1	313.8	331.0	348.2
47.5°	241.4	242.9	244.4	248.0	251.5	259.8	268.1	277.6	287.1	303.1	319.1
50°	218.3	218.9	219.5	222.7	226.0	233.4	240.8	251.8	262.8	277.6	292.4
52.5°	196.3	197.8	199.3	202.6	205.8	210.9	215.9	227.2	238.5	253.0	267.5
55°	176.2	177.1	178.0	180.3	182.7	188.6	194.6	204.4	214.1	227.5	240.8
57.5°	157.2	158.4	159.6	161.4	163.1	168.5	173.8	182.4	191.0	204.4	217.7
60°	137.6	139.1	140.6	142.7	144.7	148.9	153.0	160.8	168.5	180.3	192.2
62.5°	123.4	123.7	124.0	125.8	127.5	130.5	133.5	139.7	145.9	157.8	169.7
65°	107.4	108.3	109.1	110.0	110.9	113.3	115.7	121.0	126.4	135.2	144.1
67.5°	90.8	91.6	92.5	94.0	95.5	97.6	99.7	103.2	106.8	115.1	123.4
70°	70.6	70.6	70.6	73.0	75.3	78.9	82.5	85.1	87.8	94.6	101.4
72.5°	57.5	57.8	58.1	58.4	58.7	60.8	62.9	67.3	71.8	75.9	80.1
75°	46.9	47.2	47.5	47.8	48.0	48.6	49.2	50.7	52.2	56.9	61.7
77.5°	37.4	37.7	38.0	38.3	38.6	39.2	39.7	40.3	40.9	42.7	44.5
80°	28.5	28.8	29.1	29.4	29.7	30.0	30.3	30.8	31.4	32.3	33.2
82.5°	20.8	20.8	20.8	20.8	20.8	21.4	21.9	21.9	21.9	22.5	23.1
85°	13.1	13.1	13.1	13.3	13.6	13.6	13.6	13.9	14.2	14.2	14.2
87.5°	5.9	5.6	5.3	5.6	5.9	5.9	5.9	6.2	6.5	6.5	6.5
90°	26.7	27.6	26.7	25.8	26.7	24.9	23.9	23.0	22.1	23.0	20.2
92.5°	48.8	50.6	49.7	53.4	55.2	61.7	70.9	91.1	127.9	171.2	189.6
95°	106.8	110.4	116.9	125.2	142.7	175.8	224.6	331.3	442.7	545.8	486.0
97.5°	219.1	229.2	251.3	286.2	347.9	452.8	574.3	761.2	867.9	839.4	626.8
100°	577.1	576.2	612.1	679.3	772.2	902.9	1010.6	1085.1	1052.9	871.6	589.1
102.5°	914.0	940.6	969.2	1018.9	1086.1	1156.9	1208.5	1192.8	1062.1	811.8	533.8
105°	1170.7	1175.3	1204.8	1239.8	1282.1	1306.0	1288.6	1196.5	1004.1	740.0	490.6
107.5°	1338.3	1348.4	1360.3	1376.9	1382.4	1357.6	1285.8	1141.3	921.3	676.5	459.3
110°	1434.0	1435.8	1437.7	1430.3	1404.5	1340.1	1224.1	1054.8	844.0	624.0	442.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1453.3	1452.4	1443.2	1416.5	1364.0	1276.6	1143.1	969.2	776.8	589.1	433.5
115°	1423.8	1419.2	1400.8	1360.3	1291.3	1191.0	1055.7	895.5	725.3	566.0	432.6
117.5°	1359.4	1353.0	1325.4	1280.3	1208.5	1104.5	980.2	838.5	691.2	550.4	433.5
120°	1274.7	1269.2	1247.1	1195.6	1122.9	1029.9	919.5	795.2	665.4	540.3	437.2
122.5°	1195.6	1188.2	1163.4	1118.3	1055.7	971.0	870.7	761.2	644.3	533.8	443.6
125°	1122.9	1116.4	1093.4	1052.9	994.0	920.4	832.0	731.7	626.8	528.3	450.1
127.5°	1060.3	1054.8	1033.6	998.6	945.2	877.1	796.1	705.0	610.2	525.5	457.4
130°	1008.8	1001.4	982.1	948.9	900.1	837.6	763.0	680.2	597.3	522.8	464.8
132.5°	958.1	953.5	937.0	903.8	858.7	799.8	731.7	657.2	585.4	521.9	470.3
135°	910.3	903.8	887.3	859.6	814.5	762.1	702.3	636.9	575.2	520.9	475.8
137.5°	859.6	854.1	840.3	811.8	773.1	726.2	672.8	617.6	566.0	519.1	479.5
140°	806.3	807.2	792.5	766.7	731.7	692.1	648.0	601.0	557.8	518.2	483.2
142.5°	756.6	757.5	744.6	722.5	694.0	660.8	624.0	585.4	550.4	516.3	486.0
145°	711.5	709.6	702.3	682.9	659.9	633.2	603.8	573.4	544.0	514.5	486.9
147.5°	672.8	671.9	664.5	650.7	632.3	613.0	588.1	563.3	537.5	511.7	486.9
150°	639.7	639.7	634.2	624.0	610.2	592.7	573.4	552.2	531.1	508.1	486.9
152.5°	612.1	612.1	609.3	600.1	590.0	576.2	559.6	542.1	523.7	503.5	484.1
155°	590.0	589.1	587.2	579.8	571.6	560.5	546.7	532.0	516.3	497.9	482.3
157.5°	568.8	568.8	567.0	561.4	554.1	544.9	533.8	520.9	508.1	493.3	479.5
160°	548.6	549.5	549.5	544.0	537.5	531.1	521.9	511.7	499.8	487.8	477.7
162.5°	530.1	531.1	531.1	526.5	522.8	517.3	509.0	500.7	491.5	482.3	474.0
165°	514.5	514.5	515.4	511.7	508.1	503.5	497.0	491.5	484.1	476.8	470.3
167.5°	498.9	498.9	499.8	497.0	495.2	491.5	487.8	483.2	476.8	471.2	466.6
170°	485.0	485.0	486.0	484.1	483.2	481.4	477.7	474.9	470.3	465.7	463.0
172.5°	472.2	473.1	474.9	473.1	473.1	472.2	469.4	467.6	463.9	461.1	460.2
175°	463.0	463.9	464.8	463.9	463.9	463.9	462.0	461.1	459.3	457.4	457.4
177.5°	456.5	456.5	458.4	457.4	458.4	458.4	457.4	456.5	455.6	454.7	455.6
180°	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1446.8	1446.8	1446.8	1446.8	1446.8	1446.8	1446.8	1446.8	1446.8	1446.8	1446.8
2.5°	1536.1	1534.6	1520.4	1506.1	1492.2	1478.3	1467.9	1457.5	1440.0	1422.5	1411.5
5°	1631.3	1620.0	1597.5	1574.9	1541.1	1507.3	1478.8	1450.4	1414.2	1378.0	1347.7
7.5°	1684.4	1675.2	1647.9	1620.6	1575.8	1531.0	1486.6	1442.1	1388.7	1335.3	1289.6
10°	1685.9	1693.6	1671.0	1648.5	1598.1	1547.7	1487.1	1426.6	1354.9	1283.1	1224.1
12.5°	1633.1	1666.3	1661.6	1656.8	1605.5	1554.2	1480.6	1407.1	1319.0	1230.9	1157.0
15°	1534.3	1598.7	1617.7	1636.6	1594.2	1551.8	1468.2	1384.5	1281.0	1177.5	1092.7
17.5°	1407.1	1497.2	1547.4	1597.5	1566.6	1535.8	1444.1	1352.5	1235.9	1119.4	1027.1
20°	1256.4	1374.4	1453.0	1531.6	1520.4	1509.1	1414.5	1319.9	1194.1	1068.4	968.4
22.5°	1107.5	1232.1	1340.6	1449.2	1460.8	1472.3	1376.8	1281.3	1143.7	1006.1	904.3
25°	979.1	1105.7	1235.0	1364.4	1390.5	1416.6	1325.8	1235.0	1092.4	949.7	848.6
27.5°	856.6	977.0	1119.4	1261.7	1309.2	1356.6	1273.6	1190.6	1042.0	893.4	792.5
30°	756.6	864.3	1009.6	1155.0	1221.1	1287.2	1211.0	1134.8	987.4	840.0	741.2
32.5°	663.5	759.9	905.8	1051.7	1128.6	1205.4	1139.5	1073.7	931.9	790.1	692.6
35°	589.9	676.2	812.4	948.5	1034.5	1120.6	1066.6	1012.6	874.1	735.6	643.3
37.5°	526.8	599.1	727.0	854.8	946.2	1037.5	992.4	947.3	817.1	686.9	599.7
40°	474.6	532.7	651.6	770.6	860.1	949.7	911.2	872.6	756.0	639.5	557.9
42.5°	429.8	479.9	586.7	693.4	775.6	857.8	832.3	806.8	701.2	595.6	519.9
45°	390.3	432.4	526.5	620.5	696.1	771.8	751.6	731.4	640.4	549.3	479.9
47.5°	355.3	391.5	475.4	559.4	627.3	695.2	676.5	657.9	582.5	507.2	444.0
50°	323.3	354.1	424.1	494.1	555.2	616.3	600.9	585.5	523.2	460.9	406.3
52.5°	293.0	318.5	381.4	444.3	493.5	542.8	530.9	519.0	471.0	423.0	373.4
55°	264.3	287.7	340.8	393.9	436.0	478.1	466.3	454.4	417.0	379.6	336.0
57.5°	238.2	258.6	301.6	344.6	378.2	411.7	406.0	400.4	369.3	338.1	302.2
60°	210.6	229.0	266.0	303.1	330.1	357.1	350.6	344.1	321.8	299.6	268.7
62.5°	186.0	202.3	231.9	261.6	283.5	305.5	300.8	296.0	279.1	262.2	236.7
65°	160.2	176.2	200.2	224.2	241.4	258.6	254.5	250.3	237.6	224.8	204.4
67.5°	136.7	150.1	170.8	191.6	203.2	214.7	212.4	210.0	200.2	190.4	174.4
70°	113.0	124.6	141.8	159.0	167.0	175.0	175.9	176.8	167.9	159.0	147.1
72.5°	89.3	98.5	114.5	130.5	136.7	143.0	142.7	142.4	137.0	131.7	121.0
75°	68.5	75.3	87.8	100.3	105.6	110.9	112.1	113.3	108.3	103.2	97.3
77.5°	49.2	54.0	63.5	73.0	78.9	84.8	85.4	86.0	83.6	81.3	75.6
80°	34.7	36.2	42.1	48.0	54.3	60.5	61.4	62.3	59.9	57.5	54.0
82.5°	24.0	24.9	27.0	29.1	34.1	39.2	40.3	41.5	40.3	39.2	35.3
85°	14.5	14.8	15.7	16.6	19.0	21.4	22.5	23.7	23.1	22.5	20.5
87.5°	6.5	6.5	6.8	7.1	7.7	8.3	9.8	11.3	10.4	9.5	8.6
90°	17.5	14.7	12.0	10.1	8.3	5.5	3.7	1.8	3.7	5.5	8.3
92.5°	141.7	93.0	63.5	46.9	37.7	29.5	20.2	13.8	20.2	29.5	37.7
95°	335.0	197.9	119.7	83.8	59.8	44.2	34.1	31.3	34.1	44.2	59.8
97.5°	372.8	213.5	136.2	96.6	72.7	58.9	50.6	49.7	50.6	58.9	72.7
100°	347.0	210.8	146.3	110.4	88.4	75.5	69.0	68.1	69.0	75.5	88.4
102.5°	324.9	214.5	158.3	126.1	106.8	94.8	89.3	87.4	89.3	94.8	106.8
105°	316.6	221.8	172.1	143.6	126.1	115.0	109.5	106.8	109.5	115.0	126.1
107.5°	314.8	233.8	189.6	162.9	146.3	135.3	129.8	127.0	129.8	135.3	146.3
110°	319.4	249.4	208.0	182.2	166.6	156.5	151.9	149.1	151.9	156.5	166.6



TEST NUMBER: P832211

CATALOG NUMBER: S123RDIP-S560D1195U927-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	328.6	265.1	227.3	202.5	186.8	176.7	172.1	169.4	172.1	176.7	186.8
115°	338.7	282.6	247.6	222.7	207.1	197.9	192.4	188.7	192.4	197.9	207.1
117.5°	351.6	301.0	266.0	243.0	225.5	217.2	212.6	208.0	212.6	217.2	225.5
120°	366.3	318.5	285.3	262.3	244.8	235.6	231.0	228.3	231.0	235.6	244.8
122.5°	380.1	336.9	304.7	279.8	263.2	253.1	248.5	245.7	248.5	253.1	263.2
125°	394.8	354.4	322.1	297.3	279.8	269.7	264.2	262.3	264.2	269.7	279.8
127.5°	406.8	370.0	338.7	313.9	294.5	284.4	278.0	275.2	278.0	284.4	294.5
130°	418.8	383.8	353.4	328.6	309.3	298.2	289.9	287.2	289.9	298.2	309.3
132.5°	429.8	395.8	366.3	342.4	323.1	309.3	300.0	296.4	300.0	309.3	323.1
135°	439.0	407.7	379.2	354.4	335.0	321.2	311.1	307.4	311.1	321.2	335.0
137.5°	446.4	416.0	388.4	365.4	346.1	331.3	321.2	317.5	321.2	331.3	346.1
140°	451.9	424.3	397.6	374.6	356.2	341.5	332.3	327.7	332.3	341.5	356.2
142.5°	457.4	430.7	405.0	383.8	365.4	352.5	342.4	338.7	342.4	352.5	365.4
145°	461.1	436.3	412.3	391.2	375.5	361.7	353.4	350.7	353.4	361.7	375.5
147.5°	463.9	440.9	418.8	400.4	384.7	372.8	364.5	362.6	364.5	372.8	384.7
150°	464.8	445.5	424.3	407.7	394.8	382.9	375.5	374.6	375.5	382.9	394.8
152.5°	466.6	448.2	430.7	415.1	404.1	393.9	386.6	386.6	386.6	393.9	404.1
155°	466.6	451.9	436.3	423.4	413.3	404.1	398.5	398.5	398.5	404.1	413.3
157.5°	467.6	453.8	440.9	430.7	421.5	413.3	408.7	407.7	408.7	413.3	421.5
160°	467.6	456.5	445.5	436.3	429.8	422.5	418.8	418.8	418.8	422.5	429.8
162.5°	466.6	457.4	448.2	440.9	435.3	429.8	427.1	427.1	427.1	429.8	435.3
165°	464.8	458.4	451.0	444.6	440.9	436.3	434.4	435.3	434.4	436.3	440.9
167.5°	463.9	458.4	452.8	448.2	445.5	441.8	440.9	441.8	440.9	441.8	445.5
170°	461.1	457.4	452.8	451.0	449.2	446.4	445.5	447.3	445.5	446.4	449.2
172.5°	460.2	457.4	453.8	452.8	451.9	450.1	450.1	451.0	450.1	450.1	451.9
175°	458.4	456.5	454.7	453.8	453.8	451.9	452.8	453.8	452.8	451.9	453.8
177.5°	457.4	455.6	454.7	454.7	454.7	453.8	454.7	455.6	454.7	453.8	454.7
180°	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7



TEST NUMBER: P832211

CATALOG NUMBER: S123RDIP-S560D1195U927-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1446.8	1446.8	1446.8	1446.8	1446.8	1446.8	1446.8	1446.8	1446.8	1446.8	1446.8
2.5°	1400.5	1383.6	1366.7	1354.6	1342.4	1327.3	1312.2	1311.6	1311.0	1299.7	1288.4
5°	1317.5	1288.1	1258.8	1230.0	1201.2	1172.5	1143.7	1137.2	1130.6	1120.8	1111.1
7.5°	1243.9	1197.1	1150.2	1113.4	1076.7	1047.9	1019.1	999.5	980.0	964.8	949.7
10°	1165.0	1106.9	1048.8	1004.3	959.8	928.7	897.5	875.0	852.4	841.7	831.1
12.5°	1083.2	1020.0	956.8	913.2	869.6	832.3	794.9	774.4	754.0	739.1	724.3
15°	1007.8	939.9	872.0	825.7	779.5	744.5	709.5	689.0	668.5	653.7	638.9
17.5°	934.9	866.4	797.9	751.0	704.1	672.4	640.7	620.8	600.9	591.7	582.5
20°	868.4	799.3	730.2	686.0	641.8	610.7	579.6	568.9	558.2	549.6	541.0
22.5°	802.6	736.2	669.7	627.3	584.9	562.4	539.8	531.2	522.6	516.1	509.6
25°	747.4	681.3	615.1	578.1	541.0	523.5	506.0	500.4	494.7	488.2	481.7
27.5°	691.7	628.8	565.9	536.3	506.6	492.4	478.1	471.0	463.9	458.5	453.2
30°	642.4	584.3	526.2	501.5	476.9	464.5	452.0	444.3	436.6	431.6	426.5
32.5°	595.0	543.4	491.8	470.7	449.6	437.5	425.3	417.9	410.5	404.6	398.6
35°	551.1	506.3	461.5	442.2	423.0	410.8	398.6	391.2	383.8	377.9	371.9
37.5°	512.5	471.9	431.3	413.2	395.1	384.4	373.7	366.0	358.3	352.1	345.8
40°	476.3	440.5	404.6	387.1	369.6	358.0	346.4	339.6	332.8	327.1	321.5
42.5°	444.3	411.4	378.5	361.3	344.1	333.1	322.1	314.1	306.1	302.8	299.6
45°	410.5	381.4	352.4	335.8	319.1	307.6	296.0	289.2	282.4	279.4	276.4
47.5°	380.8	353.8	326.9	310.5	294.2	283.8	273.5	268.1	262.8	258.6	254.5
50°	351.8	325.7	299.6	283.8	268.1	259.2	250.3	243.8	237.3	234.3	231.3
52.5°	323.9	300.2	276.4	260.4	244.4	235.8	227.2	221.6	215.9	209.7	203.5
55°	292.4	271.7	250.9	236.7	222.4	213.6	204.7	198.1	191.6	185.1	178.6
57.5°	266.3	245.9	225.4	212.7	199.9	191.3	182.7	175.6	168.5	163.1	157.8
60°	237.9	220.1	202.3	189.8	177.4	169.1	160.8	153.9	147.1	144.4	141.8
62.5°	211.2	194.6	178.0	167.0	156.0	148.0	140.0	135.5	131.1	129.3	127.5
65°	183.9	169.7	155.4	145.3	135.2	128.4	121.6	119.5	117.5	116.0	114.5
67.5°	158.4	146.2	134.1	125.2	116.3	111.5	106.8	104.4	102.0	100.3	98.5
70°	135.2	124.6	113.9	106.2	98.5	94.0	89.6	87.5	85.4	82.2	78.9
72.5°	110.3	102.0	93.7	87.8	81.9	78.0	74.1	70.0	65.8	62.9	59.9
75°	91.4	83.0	74.7	69.1	63.5	59.0	54.6	53.1	51.6	50.7	49.8
77.5°	70.0	62.9	55.8	51.3	46.9	44.8	42.7	41.8	40.9	40.6	40.3
80°	50.4	44.5	38.6	36.2	33.8	33.2	32.6	32.0	31.4	31.1	30.8
82.5°	31.4	28.5	25.5	24.9	24.3	24.0	23.7	23.4	23.1	22.8	22.5
85°	18.4	17.2	16.0	15.7	15.4	15.1	14.8	14.8	14.8	14.8	14.8
87.5°	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.4	7.1
90°	10.1	12.0	14.7	17.5	20.2	23.0	22.1	23.0	23.9	24.9	26.7
92.5°	46.9	63.5	93.0	141.7	189.6	171.2	127.9	91.1	70.9	61.7	55.2
95°	83.8	119.7	197.9	335.0	486.0	545.8	442.7	331.3	224.6	175.8	142.7
97.5°	96.6	136.2	213.5	372.8	626.8	839.4	867.9	761.2	574.3	452.8	347.9
100°	110.4	146.3	210.8	347.0	589.1	871.6	1052.9	1085.1	1010.6	902.9	772.2
102.5°	126.1	158.3	214.5	324.9	533.8	811.8	1062.1	1192.8	1208.5	1156.9	1086.1
105°	143.6	172.1	221.8	316.6	490.6	740.0	1004.1	1196.5	1288.6	1306.0	1282.1
107.5°	162.9	189.6	233.8	314.8	459.3	676.5	921.3	1141.3	1285.8	1357.6	1382.4
110°	182.2	208.0	249.4	319.4	442.7	624.0	844.0	1054.8	1224.1	1340.1	1404.5



TEST NUMBER: P832211

CATALOG NUMBER: S123RDIP-S560D1195U927-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	202.5	227.3	265.1	328.6	433.5	589.1	776.8	969.2	1143.1	1276.6	1364.0
115°	222.7	247.6	282.6	338.7	432.6	566.0	725.3	895.5	1055.7	1191.0	1291.3
117.5°	243.0	266.0	301.0	351.6	433.5	550.4	691.2	838.5	980.2	1104.5	1208.5
120°	262.3	285.3	318.5	366.3	437.2	540.3	665.4	795.2	919.5	1029.9	1122.9
122.5°	279.8	304.7	336.9	380.1	443.6	533.8	644.3	761.2	870.7	971.0	1055.7
125°	297.3	322.1	354.4	394.8	450.1	528.3	626.8	731.7	832.0	920.4	994.0
127.5°	313.9	338.7	370.0	406.8	457.4	525.5	610.2	705.0	796.1	877.1	945.2
130°	328.6	353.4	383.8	418.8	464.8	522.8	597.3	680.2	763.0	837.6	900.1
132.5°	342.4	366.3	395.8	429.8	470.3	521.9	585.4	657.2	731.7	799.8	858.7
135°	354.4	379.2	407.7	439.0	475.8	520.9	575.2	636.9	702.3	762.1	814.5
137.5°	365.4	388.4	416.0	446.4	479.5	519.1	566.0	617.6	672.8	726.2	773.1
140°	374.6	397.6	424.3	451.9	483.2	518.2	557.8	601.0	648.0	692.1	731.7
142.5°	383.8	405.0	430.7	457.4	486.0	516.3	550.4	585.4	624.0	660.8	694.0
145°	391.2	412.3	436.3	461.1	486.9	514.5	544.0	573.4	603.8	633.2	659.9
147.5°	400.4	418.8	440.9	463.9	486.9	511.7	537.5	563.3	588.1	613.0	632.3
150°	407.7	424.3	445.5	464.8	486.9	508.1	531.1	552.2	573.4	592.7	610.2
152.5°	415.1	430.7	448.2	466.6	484.1	503.5	523.7	542.1	559.6	576.2	590.0
155°	423.4	436.3	451.9	466.6	482.3	497.9	516.3	532.0	546.7	560.5	571.6
157.5°	430.7	440.9	453.8	467.6	479.5	493.3	508.1	520.9	533.8	544.9	554.1
160°	436.3	445.5	456.5	467.6	477.7	487.8	499.8	511.7	521.9	531.1	537.5
162.5°	440.9	448.2	457.4	466.6	474.0	482.3	491.5	500.7	509.0	517.3	522.8
165°	444.6	451.0	458.4	464.8	470.3	476.8	484.1	491.5	497.0	503.5	508.1
167.5°	448.2	452.8	458.4	463.9	466.6	471.2	476.8	483.2	487.8	491.5	495.2
170°	451.0	452.8	457.4	461.1	463.0	465.7	470.3	474.9	477.7	481.4	483.2
172.5°	452.8	453.8	457.4	460.2	460.2	461.1	463.9	467.6	469.4	472.2	473.1
175°	453.8	454.7	456.5	458.4	457.4	457.4	459.3	461.1	462.0	463.9	463.9
177.5°	454.7	454.7	455.6	457.4	455.6	454.7	455.6	456.5	457.4	458.4	458.4
180°	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7



TEST NUMBER: P832211

CATALOG NUMBER: S123RDIP-S560D1195U927-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1446.8	1446.8	1446.8	1446.8
2.5°	1285.5	1282.5	1281.3	1280.1
5°	1101.9	1092.7	1090.6	1088.5
7.5°	945.9	942.0	929.2	916.5
10°	819.2	807.3	802.0	796.7
12.5°	713.3	702.3	700.6	698.8
15°	631.2	623.5	620.8	618.1
17.5°	577.2	571.8	568.6	565.3
20°	537.1	533.3	530.9	528.5
22.5°	506.6	503.6	501.8	500.1
25°	477.2	472.8	471.3	469.8
27.5°	449.3	445.5	444.0	442.5
30°	423.2	420.0	417.9	415.8
32.5°	394.8	390.9	389.7	388.5
35°	369.6	367.2	366.0	364.8
37.5°	342.9	339.9	338.1	336.3
40°	320.0	318.5	317.7	316.8
42.5°	296.9	294.2	293.9	293.6
45°	273.8	271.1	270.5	269.9
47.5°	252.1	249.7	249.4	249.1
50°	228.1	224.8	222.4	220.1
52.5°	200.5	197.5	195.5	193.4
55°	175.3	172.0	170.2	168.5
57.5°	156.3	154.8	153.9	153.0
60°	140.9	140.0	139.4	138.8
62.5°	126.6	125.8	125.8	125.8
65°	113.6	112.7	111.8	110.9
67.5°	96.7	94.9	94.6	94.3
70°	76.2	73.6	73.3	73.0
72.5°	59.6	59.3	58.7	58.1
75°	49.2	48.6	48.6	48.6
77.5°	39.7	39.2	39.2	39.2
80°	30.5	30.3	30.5	30.8
82.5°	22.5	22.5	22.2	21.9
85°	14.5	14.2	14.2	14.2
87.5°	7.1	7.1	7.1	7.1
90°	25.8	26.7	27.6	26.7
92.5°	53.4	49.7	50.6	48.8
95°	125.2	116.9	110.4	106.8
97.5°	286.2	251.3	229.2	219.1
100°	679.3	612.1	576.2	577.1
102.5°	1018.9	969.2	940.6	914.0
105°	1239.8	1204.8	1175.3	1170.7
107.5°	1376.9	1360.3	1348.4	1338.3
110°	1430.3	1437.7	1435.8	1434.0



TEST NUMBER: P832211

CATALOG NUMBER: S123RDIP-S560D1195U927-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	1416.5	1443.2	1452.4	1453.3
115°	1360.3	1400.8	1419.2	1423.8
117.5°	1280.3	1325.4	1353.0	1359.4
120°	1195.6	1247.1	1269.2	1274.7
122.5°	1118.3	1163.4	1188.2	1195.6
125°	1052.9	1093.4	1116.4	1122.9
127.5°	998.6	1033.6	1054.8	1060.3
130°	948.9	982.1	1001.4	1008.8
132.5°	903.8	937.0	953.5	958.1
135°	859.6	887.3	903.8	910.3
137.5°	811.8	840.3	854.1	859.6
140°	766.7	792.5	807.2	806.3
142.5°	722.5	744.6	757.5	756.6
145°	682.9	702.3	709.6	711.5
147.5°	650.7	664.5	671.9	672.8
150°	624.0	634.2	639.7	639.7
152.5°	600.1	609.3	612.1	612.1
155°	579.8	587.2	589.1	590.0
157.5°	561.4	567.0	568.8	568.8
160°	544.0	549.5	549.5	548.6
162.5°	526.5	531.1	531.1	530.1
165°	511.7	515.4	514.5	514.5
167.5°	497.0	499.8	498.9	498.9
170°	484.1	486.0	485.0	485.0
172.5°	473.1	474.9	473.1	472.2
175°	463.9	464.8	463.9	463.0
177.5°	457.4	458.4	456.5	456.5
180°	454.7	454.7	454.7	454.7



TEST NUMBER: P832211

CATALOG NUMBER: S123RDIP-S560D1195U927-4F0-1E-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	8.80	9.52	9.88	10.59	12.05	13.47	14.18	14.55	15.25	16.71
	3H	10.02	10.65	11.10	11.73	13.21	14.96	15.59	16.05	16.68	18.16
	4H	10.39	11.00	11.49	12.08	13.57	15.44	16.05	16.54	17.13	18.61
	6H	10.67	11.22	11.78	12.31	13.81	15.75	16.30	16.85	17.39	18.89
	8H	10.75	11.28	11.86	12.38	13.87	15.82	16.35	16.93	17.45	18.94
	12H	10.80	11.30	11.92	12.40	13.91	15.85	16.35	16.97	17.45	18.96
4H	2H	9.51	10.12	10.62	11.20	12.68	13.45	14.05	14.55	15.13	16.62
	3H	10.87	11.37	11.98	12.48	13.98	15.10	15.60	16.21	16.71	18.21
	4H	11.32	11.78	12.44	12.88	14.40	15.70	16.16	16.81	17.26	18.78
	6H	11.69	12.08	12.81	13.20	14.71	16.13	16.52	17.25	17.65	19.16
	8H	11.81	12.18	12.93	13.29	14.82	16.26	16.63	17.38	17.74	19.27
	12H	11.88	12.21	13.02	13.34	14.87	16.32	16.65	17.45	17.78	19.31
8H	4H	11.63	12.00	12.75	13.11	14.64	15.66	16.02	16.78	17.14	18.67
	6H	12.09	12.39	13.23	13.55	15.07	16.15	16.45	17.29	17.61	19.13
	8H	12.28	12.55	13.43	13.68	15.23	16.34	16.60	17.48	17.74	19.28
	12H	12.42	12.65	13.57	13.78	15.37	16.45	16.68	17.60	17.81	19.39
12H	4H	11.63	11.97	12.77	13.09	14.63	15.60	15.93	16.74	17.06	18.59
	6H	12.15	12.41	13.30	13.55	15.09	16.12	16.39	17.27	17.53	19.07
	8H	12.36	12.59	13.51	13.73	15.31	16.31	16.54	17.46	17.68	19.26