

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: P832213

Luminaire Tested: S123RDIP-S560D1195U930-4F0-1E-UDD-G1

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P832213
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-9)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDIP-S560D1195U930-4F0-1E-UDD-G1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: -

Summary

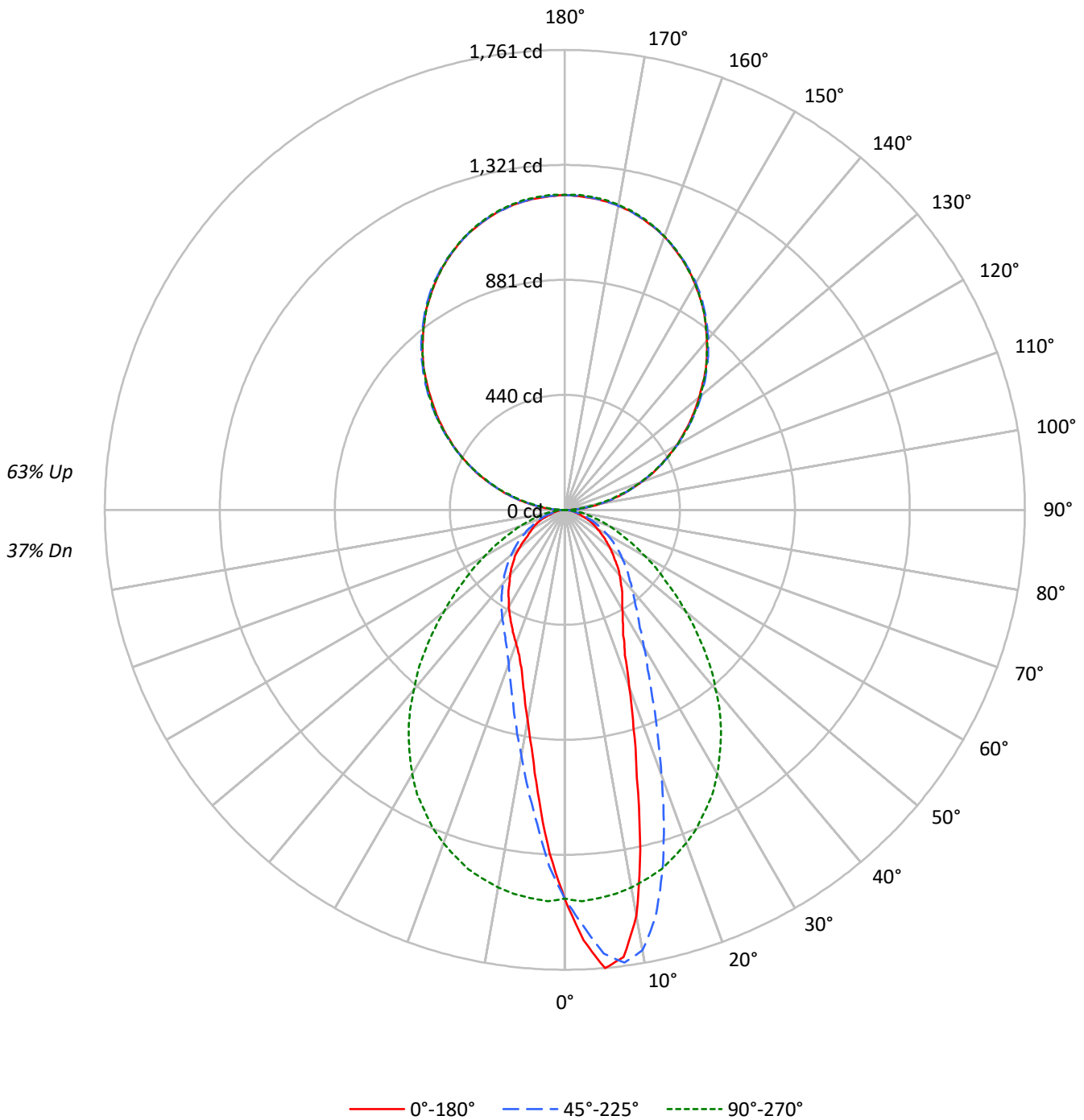
Lumens per Lamp: N/A
Luminaire Lumens: 5318.0 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Indirect

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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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	60	60	60	44	44	44	37				
1	95	91	88	85	86	83	80	77	68	65	64	53	52	51	40	39	39	32				
2	87	81	75	70	79	73	69	64	60	57	54	47	45	43	36	35	33	28				
3	80	71	65	59	73	65	59	55	53	49	46	43	40	37	33	31	29	25				
4	74	64	56	51	67	58	52	47	48	43	40	38	35	33	30	27	26	22				
5	68	57	49	44	61	52	46	41	43	38	35	35	31	29	27	25	23	20				
6	63	51	44	38	57	47	41	36	39	34	31	32	28	26	25	22	21	18				
7	58	47	39	34	53	43	36	32	36	31	27	29	26	23	23	21	19	16				
8	54	42	35	30	49	39	33	28	33	28	24	27	23	21	21	19	17	15				
9	50	39	32	27	46	36	30	25	30	25	22	25	21	19	20	17	16	13				
10	47	36	29	24	43	33	27	23	28	23	20	23	20	17	19	16	14	12				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	16027	16027	16027	16027	16027
5°	19031	18425	16129	13038	12105
10°	17243	18714	16048	10447	8961
15°	11871	16046	15879	8538	7090
20°	8259	12354	15560	7199	6231
25°	6293	9415	15096	6399	5742
30°	5479	7527	14516	5941	5320
35°	5030	6349	13694	5556	4934
40°	4589	5670	12619	5176	4581
45°	4145	5186	11459	4818	4229
50°	3763	4784	10091	4468	3793
55°	3402	4393	8777	4125	3254
60°	3048	3996	7623	3746	3076
65°	2814	3545	6561	3367	2909
70°	2288	3065	5725	3046	2364
75°	2005	2437	4849	2524	2084
80°	1816	2064	3973	2120	1965
85°	1655	1815	3013	1927	1815

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 12091 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.7	2.6
10°-20°	314.1	5.9
20°-30°	360.3	6.8
30°-40°	355.2	6.7
40°-50°	313.2	5.9
50°-60°	241.0	4.5
60°-70°	158.4	3.0
70°-80°	76.9	1.4
80°-90°	21.9	0.4
90°-100°	77.6	1.5
100°-110°	235.0	4.4
110°-120°	400.0	7.5
120°-130°	526.2	9.9
130°-140°	591.5	11.1
140°-150°	581.5	10.9
150°-160°	489.5	9.2
160°-170°	325.9	6.1
170°-180°	114.1	2.1
0°-30°	810.1	15.2
0°-40°	1165.3	21.9
0°-60°	1719.5	32.3
0°-90°	1976.8	37.2
90°-120°	712.6	13.4
90°-150°	2411.7	45.3
90°-180°	3341.0	62.8
0°-180°	5318.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1489	1489	1489	1489	1489	
5°	1761	1705	1493	1207	1120	161
15°	1065	1440	1425	766	636	301
25°	530	793	1271	539	484	250
35°	383	483	1042	423	376	239
45°	272	341	753	316	278	211
55°	181	234	468	220	173	163
65°	110	139	258	132	114	108
75°	48	59	117	61	50	52
85°	13	15	24	16	15	14
90°	28	23	1	23	28	14
95°	74	70	56	70	74	74
105°	226	224	213	224	226	239
115°	404	404	403	404	404	400
125°	583	590	589	590	583	521
135°	764	769	764	769	764	587
145°	927	932	927	932	927	579
155°	1060	1063	1062	1063	1060	488
165°	1153	1154	1157	1154	1153	325
175°	1198	1199	1203	1199	1198	114
180°	1206	1206	1206	1206	1206	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1489.0	1489.0	1489.0	1489.0	1489.0	1489.0	1489.0	1489.0	1489.0	1489.0	1489.0
2.5°	1650.2	1645.0	1639.8	1638.3	1636.8	1631.9	1627.0	1616.0	1605.0	1593.7	1582.4
5°	1761.3	1761.9	1762.5	1761.0	1759.5	1753.1	1746.7	1733.2	1719.8	1705.2	1690.5
7.5°	1727.1	1736.9	1746.7	1748.5	1750.3	1755.2	1760.1	1757.0	1754.0	1748.5	1743.0
10°	1577.6	1576.9	1576.3	1587.3	1598.3	1631.0	1663.6	1680.4	1697.2	1712.2	1727.1
12.5°	1333.4	1334.3	1335.2	1371.2	1407.2	1438.1	1468.9	1511.6	1554.4	1600.5	1646.5
15°	1065.3	1080.3	1095.3	1127.3	1159.4	1205.8	1252.2	1309.5	1366.9	1439.9	1512.8
17.5°	874.9	881.3	887.7	918.5	949.3	993.3	1037.3	1102.3	1167.3	1261.3	1355.3
20°	721.0	726.8	732.6	754.9	777.2	819.3	861.4	923.4	985.4	1078.5	1171.6
22.5°	602.0	613.3	624.6	639.5	654.5	685.0	715.5	778.7	841.9	926.8	1011.6
25°	529.9	535.1	540.3	553.1	565.9	595.2	624.6	666.4	708.2	792.7	877.3
27.5°	481.1	482.6	484.1	493.6	503.1	522.0	540.9	579.7	618.4	688.0	757.6
30°	440.8	443.5	446.3	453.6	460.9	474.7	488.4	515.9	543.4	605.6	667.9
32.5°	409.7	411.2	412.7	418.8	424.9	435.0	445.1	466.7	488.4	536.0	583.6
35°	382.8	383.1	383.4	388.0	392.6	402.3	412.1	430.1	448.1	483.2	518.3
37.5°	352.3	354.4	356.5	359.9	363.3	371.8	380.3	395.0	409.7	438.7	467.7
40°	326.6	328.5	330.3	334.3	338.2	344.9	351.7	365.1	378.5	403.5	428.6
42.5°	301.0	302.2	303.4	307.4	311.4	319.6	327.8	338.5	349.2	370.0	390.7
45°	272.3	275.3	278.4	282.7	286.9	294.0	301.0	312.0	323.0	340.7	358.4
47.5°	248.5	250.0	251.5	255.2	258.9	267.4	276.0	285.7	295.5	312.0	328.5
50°	224.7	225.3	225.9	229.2	232.6	240.2	247.9	259.2	270.5	285.7	301.0
52.5°	202.1	203.6	205.1	208.5	211.8	217.0	222.2	233.8	245.4	260.4	275.3
55°	181.3	182.2	183.2	185.6	188.0	194.1	200.2	210.3	220.4	234.1	247.9
57.5°	161.8	163.0	164.2	166.1	167.9	173.4	178.9	187.7	196.6	210.3	224.1
60°	141.6	143.2	144.7	146.8	149.0	153.2	157.5	165.4	173.4	185.6	197.8
62.5°	127.0	127.3	127.6	129.4	131.3	134.3	137.4	143.8	150.2	162.4	174.6
65°	110.5	111.4	112.3	113.2	114.2	116.6	119.0	124.5	130.0	139.2	148.4
67.5°	93.4	94.3	95.2	96.8	98.3	100.4	102.6	106.2	109.9	118.4	127.0
70°	72.7	72.7	72.7	75.1	77.5	81.2	84.9	87.6	90.4	97.4	104.4
72.5°	59.2	59.5	59.8	60.1	60.4	62.6	64.7	69.3	73.9	78.1	82.4
75°	48.2	48.5	48.8	49.1	49.5	50.1	50.7	52.2	53.7	58.6	63.5
77.5°	38.5	38.8	39.1	39.4	39.7	40.3	40.9	41.5	42.1	44.0	45.8
80°	29.3	29.6	29.9	30.2	30.5	30.8	31.1	31.7	32.4	33.3	34.2
82.5°	21.4	21.4	21.4	21.4	21.4	22.0	22.6	22.6	22.6	23.2	23.8
85°	13.4	13.4	13.4	13.7	14.0	14.0	14.0	14.3	14.7	14.7	14.7
87.5°	6.1	5.8	5.5	5.8	6.1	6.1	6.1	6.4	6.7	6.7	6.7
90°	28.4	28.0	27.6	27.2	26.7	26.1	25.3	24.4	23.6	22.7	20.0
92.5°	40.7	41.2	41.6	42.0	42.4	42.3	41.7	41.0	40.4	39.8	38.5
95°	73.9	73.9	73.9	73.9	73.9	73.5	72.6	71.8	70.9	70.1	68.4
97.5°	106.1	106.3	106.5	106.7	106.9	106.5	105.5	104.4	103.4	102.3	101.0
100°	144.0	143.6	143.1	142.7	142.3	141.8	141.1	140.5	139.9	139.3	138.2
102.5°	182.8	183.0	183.2	183.5	183.7	183.5	182.8	182.2	181.6	180.9	179.5
105°	225.5	225.0	224.6	224.2	223.8	223.6	223.6	223.6	223.6	223.6	221.7
107.5°	269.0	269.2	269.4	269.7	269.9	269.7	269.0	268.4	267.8	267.1	266.3
110°	313.5	314.0	314.4	314.8	315.2	315.0	314.2	313.3	312.5	311.7	311.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	360.9	360.9	360.9	360.9	360.9	360.4	359.3	358.3	357.2	356.2	356.2
115°	403.5	403.8	404.0	404.2	404.4	404.4	404.2	404.0	403.8	403.5	404.0
117.5°	447.1	447.7	448.4	449.0	449.6	450.0	450.0	450.0	450.0	450.0	450.4
120°	493.5	494.0	494.4	494.8	495.2	495.5	495.7	496.0	496.2	496.4	497.4
122.5°	538.1	538.7	539.3	539.9	540.6	541.2	541.8	542.5	543.1	543.7	544.2
125°	582.6	583.4	584.3	585.1	585.9	586.8	587.6	588.5	589.3	590.2	590.6
127.5°	627.1	627.9	628.8	629.6	630.5	631.5	632.8	634.0	635.3	636.6	637.0
130°	670.7	672.1	673.6	675.1	676.6	677.7	678.6	679.4	680.3	681.1	681.7
132.5°	716.1	717.2	718.2	719.3	720.4	721.4	722.5	723.5	724.6	725.6	726.0
135°	763.5	763.9	764.3	764.8	765.2	765.8	766.7	767.5	768.3	769.2	769.4
137.5°	805.2	805.8	806.5	807.1	807.7	808.6	809.6	810.7	811.7	812.8	812.1
140°	845.9	847.4	848.9	850.3	851.8	852.7	852.9	853.1	853.3	853.5	853.3
142.5°	887.6	888.7	889.7	890.8	891.8	892.4	892.7	892.9	893.1	893.3	892.9
145°	927.4	928.2	929.1	929.9	930.8	931.3	931.5	931.7	931.9	932.1	931.5
147.5°	963.4	964.6	965.9	967.2	968.4	969.1	969.1	969.1	969.1	969.1	968.4
150°	997.5	998.7	1000.0	1001.3	1002.5	1003.2	1003.2	1003.2	1003.2	1003.2	1002.7
152.5°	1030.6	1031.7	1032.7	1033.8	1034.9	1035.2	1034.7	1034.3	1033.9	1033.5	1033.3
155°	1060.0	1061.5	1063.0	1064.4	1065.9	1066.2	1065.4	1064.5	1063.7	1062.8	1062.6
157.5°	1087.5	1088.7	1090.0	1091.3	1092.5	1092.7	1091.9	1091.1	1090.2	1089.4	1089.2
160°	1114.0	1114.8	1115.7	1116.5	1117.4	1117.3	1116.2	1115.2	1114.1	1113.1	1113.1
162.5°	1133.9	1135.4	1136.8	1138.3	1139.8	1140.0	1138.9	1137.9	1136.8	1135.8	1135.6
165°	1152.8	1154.3	1155.8	1157.3	1158.7	1158.8	1157.6	1156.3	1155.1	1153.8	1153.8
167.5°	1169.9	1171.2	1172.4	1173.7	1174.9	1174.9	1173.7	1172.4	1171.2	1169.9	1169.7
170°	1182.2	1183.7	1185.2	1186.6	1188.1	1188.1	1186.6	1185.2	1183.7	1182.2	1182.2
172.5°	1191.7	1193.2	1194.6	1196.1	1197.6	1197.7	1196.4	1195.2	1193.9	1192.6	1192.6
175°	1198.3	1199.8	1201.3	1202.7	1204.2	1204.3	1203.0	1201.8	1200.5	1199.3	1199.3
177.5°	1202.1	1203.6	1205.0	1206.5	1208.0	1208.1	1206.8	1205.6	1204.3	1203.0	1203.0
180°	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1489.0	1489.0	1489.0	1489.0	1489.0	1489.0	1489.0	1489.0	1489.0	1489.0	1489.0
2.5°	1580.9	1579.4	1564.7	1550.1	1535.7	1521.4	1510.7	1500.0	1482.0	1464.0	1452.7
5°	1678.9	1667.3	1644.1	1620.9	1586.1	1551.3	1522.0	1492.7	1455.5	1418.2	1387.1
7.5°	1733.5	1724.1	1696.0	1667.9	1621.8	1575.7	1529.9	1484.1	1429.2	1374.3	1327.2
10°	1735.1	1743.0	1719.8	1696.6	1644.7	1592.8	1530.5	1468.3	1394.4	1320.5	1259.8
12.5°	1680.7	1714.9	1710.0	1705.2	1652.3	1599.5	1523.8	1448.1	1357.5	1266.8	1190.8
15°	1579.1	1645.3	1664.9	1684.4	1640.7	1597.1	1511.0	1424.9	1318.4	1211.9	1124.6
17.5°	1448.1	1540.9	1592.5	1644.1	1612.4	1580.6	1486.3	1392.0	1272.0	1152.0	1057.1
20°	1293.1	1414.6	1495.4	1576.3	1564.7	1553.1	1455.8	1358.4	1229.0	1099.5	996.7
22.5°	1139.8	1268.0	1379.8	1491.5	1503.4	1515.3	1417.0	1318.7	1177.1	1035.4	930.7
25°	1007.6	1138.0	1271.1	1404.2	1431.0	1457.9	1364.5	1271.1	1124.3	977.4	873.3
27.5°	881.6	1005.5	1152.0	1298.6	1347.4	1396.2	1310.8	1225.3	1072.4	919.4	815.6
30°	778.7	889.5	1039.1	1188.7	1256.7	1324.8	1246.4	1167.9	1016.2	864.5	762.8
32.5°	682.9	782.1	932.2	1082.4	1161.5	1240.6	1172.8	1105.0	959.1	813.2	712.8
35°	607.2	696.0	836.1	976.2	1064.7	1153.3	1097.7	1042.1	899.6	757.0	662.1
37.5°	542.1	616.6	748.2	879.7	973.8	1067.8	1021.4	975.0	841.0	707.0	617.2
40°	488.4	548.2	670.6	793.1	885.2	977.4	937.7	898.1	778.1	658.1	574.2
42.5°	442.3	493.9	603.8	713.7	798.2	882.8	856.5	830.3	721.6	613.0	535.1
45°	401.7	445.1	541.8	638.6	716.4	794.3	773.5	752.8	659.0	565.3	493.9
47.5°	365.7	402.9	489.3	575.7	645.6	715.5	696.3	677.1	599.5	522.0	457.0
50°	332.7	364.5	436.5	508.6	571.4	634.3	618.4	602.6	538.5	474.4	418.2
52.5°	301.6	327.8	392.6	457.3	507.9	558.6	546.4	534.2	484.7	435.3	384.3
55°	272.0	296.1	350.7	405.4	448.7	492.1	479.9	467.7	429.2	390.7	345.9
57.5°	245.1	266.2	310.4	354.7	389.2	423.7	417.9	412.1	380.0	348.0	311.1
60°	216.7	235.7	273.8	312.0	339.7	367.5	360.8	354.1	331.2	308.3	276.6
62.5°	191.4	208.2	238.7	269.2	291.8	314.4	309.5	304.6	287.2	269.8	243.6
65°	164.8	181.3	206.0	230.8	248.5	266.2	261.9	257.6	244.5	231.4	210.3
67.5°	140.7	154.5	175.8	197.2	209.1	221.0	218.6	216.1	206.0	196.0	179.5
70°	116.3	128.2	145.9	163.6	171.9	180.1	181.0	181.9	172.8	163.6	151.4
72.5°	91.9	101.3	117.8	134.3	140.7	147.1	146.8	146.5	141.0	135.5	124.5
75°	70.5	77.5	90.4	103.2	108.7	114.2	115.4	116.6	111.4	106.2	100.1
77.5°	50.7	55.6	65.3	75.1	81.2	87.3	87.9	88.5	86.1	83.6	77.8
80°	35.7	37.2	43.3	49.5	55.9	62.3	63.2	64.1	61.7	59.2	55.6
82.5°	24.7	25.6	27.8	29.9	35.1	40.3	41.5	42.7	41.5	40.3	36.3
85°	15.0	15.3	16.2	17.1	19.5	22.0	23.2	24.4	23.8	23.2	21.1
87.5°	6.7	6.7	7.0	7.3	7.9	8.5	10.1	11.6	10.7	9.8	8.9
90°	17.3	14.5	11.8	9.4	7.3	5.2	3.1	0.9	3.1	5.2	7.3
92.5°	37.3	36.0	34.7	33.5	32.2	30.9	29.7	28.4	29.7	30.9	32.2
95°	66.7	65.0	63.4	61.8	60.3	58.8	57.4	55.9	57.4	58.8	60.3
97.5°	99.8	98.5	97.3	96.1	95.0	94.0	92.9	91.9	92.9	94.0	95.0
100°	137.1	136.1	135.0	133.9	132.6	131.4	130.1	128.8	130.1	131.4	132.6
102.5°	178.0	176.5	175.0	174.0	173.4	172.7	172.1	171.5	172.1	172.7	173.4
105°	219.8	217.9	216.0	214.8	214.4	214.0	213.6	213.1	213.6	214.0	214.4
107.5°	265.4	264.6	263.8	263.2	263.0	262.8	262.6	262.4	262.6	262.8	263.0
110°	310.8	310.4	310.0	309.6	309.1	308.7	308.3	307.9	308.3	308.7	309.1



TEST NUMBER: P832213

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	356.2	356.2	356.2	356.1	355.9	355.7	355.4	355.2	355.4	355.7	355.9
115°	404.4	404.8	405.2	405.1	404.5	403.9	403.2	402.6	403.2	403.9	404.5
117.5°	450.8	451.2	451.6	451.7	451.5	451.3	451.1	450.9	451.1	451.3	451.5
120°	498.5	499.5	500.6	500.5	499.2	498.0	496.7	495.4	496.7	498.0	499.2
122.5°	544.6	545.0	545.4	545.2	544.4	543.5	542.7	541.8	542.7	543.5	544.4
125°	591.0	591.4	591.8	591.7	591.1	590.5	589.8	589.2	589.8	590.5	591.1
127.5°	637.4	637.8	638.3	637.8	636.6	635.3	634.0	632.8	634.0	635.3	636.6
130°	682.4	683.0	683.6	683.1	681.4	679.7	678.0	676.4	678.0	679.7	681.4
132.5°	726.5	726.9	727.3	726.7	725.0	723.3	721.6	719.9	721.6	723.3	725.0
135°	769.6	769.8	770.0	769.5	768.2	767.0	765.7	764.5	765.7	767.0	768.2
137.5°	811.5	810.9	810.2	809.4	808.3	807.3	806.2	805.2	806.2	807.3	808.3
140°	853.1	852.9	852.7	852.0	851.0	849.9	848.9	847.8	848.9	849.9	851.0
142.5°	892.4	892.0	891.6	890.9	889.8	888.8	887.7	886.7	887.7	888.8	889.8
145°	930.9	930.2	929.6	929.1	928.7	928.2	927.8	927.4	927.8	928.2	928.7
147.5°	967.8	967.2	966.5	965.8	965.0	964.1	963.3	962.4	963.3	964.1	965.0
150°	1002.3	1001.9	1001.5	1001.1	1000.6	1000.2	999.8	999.4	999.8	1000.2	1000.6
152.5°	1033.1	1032.9	1032.6	1032.2	1031.6	1031.0	1030.3	1029.7	1030.3	1031.0	1031.6
155°	1062.4	1062.2	1062.0	1061.9	1061.9	1061.9	1061.9	1061.9	1061.9	1061.9	1061.9
157.5°	1089.0	1088.7	1088.5	1088.5	1088.7	1089.0	1089.2	1089.4	1089.2	1089.0	1088.7
160°	1113.1	1113.1	1113.1	1113.3	1113.7	1114.1	1114.5	1114.9	1114.5	1114.1	1113.7
162.5°	1135.4	1135.2	1134.9	1135.2	1135.8	1136.4	1137.1	1137.7	1137.1	1136.4	1135.8
165°	1153.8	1153.8	1153.8	1154.1	1154.7	1155.4	1156.0	1156.6	1156.0	1155.4	1154.7
167.5°	1169.5	1169.3	1169.0	1169.4	1170.2	1171.0	1171.9	1172.7	1171.9	1171.0	1170.2
170°	1182.2	1182.2	1182.2	1182.6	1183.5	1184.3	1185.2	1186.0	1185.2	1184.3	1183.5
172.5°	1192.6	1192.6	1192.6	1193.0	1193.9	1194.7	1195.6	1196.4	1195.6	1194.7	1193.9
175°	1199.3	1199.3	1199.3	1199.7	1200.5	1201.4	1202.2	1203.0	1202.2	1201.4	1200.5
177.5°	1203.0	1203.0	1203.0	1203.5	1204.3	1205.2	1206.0	1206.8	1206.0	1205.2	1204.3
180°	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1489.0	1489.0	1489.0	1489.0	1489.0	1489.0	1489.0	1489.0	1489.0	1489.0	1489.0
2.5°	1441.4	1424.0	1406.6	1394.1	1381.6	1366.0	1350.4	1349.8	1349.2	1337.6	1326.0
5°	1355.9	1325.7	1295.5	1265.9	1236.3	1206.7	1177.1	1170.3	1163.6	1153.6	1143.5
7.5°	1280.2	1232.0	1183.8	1145.9	1108.1	1078.5	1048.9	1028.7	1008.6	993.0	977.4
10°	1199.0	1139.2	1079.4	1033.6	987.8	955.8	923.7	900.5	877.3	866.3	855.3
12.5°	1114.8	1049.8	984.8	939.9	895.0	856.5	818.1	797.0	776.0	760.7	745.4
15°	1037.3	967.4	897.4	849.8	802.2	766.2	730.2	709.1	688.0	672.8	657.5
17.5°	962.2	891.6	821.1	772.9	724.7	692.0	659.4	638.9	618.4	609.0	599.5
20°	893.8	822.7	751.5	706.1	660.6	628.5	596.5	585.5	574.5	565.6	556.8
22.5°	826.0	757.6	689.3	645.6	602.0	578.8	555.6	546.7	537.9	531.1	524.4
25°	769.2	701.2	633.1	594.9	556.8	538.8	520.8	515.0	509.2	502.4	495.7
27.5°	711.9	647.1	582.4	551.9	521.4	506.7	492.1	484.7	477.4	471.9	466.4
30°	661.2	601.4	541.5	516.2	490.8	478.0	465.2	457.3	449.3	444.1	439.0
32.5°	612.3	559.2	506.1	484.4	462.8	450.3	437.7	430.1	422.5	416.4	410.3
35°	567.2	521.1	475.0	455.1	435.3	422.8	410.3	402.6	395.0	388.9	382.8
37.5°	527.5	485.7	443.8	425.2	406.6	395.6	384.6	376.7	368.7	362.3	355.9
40°	490.2	453.3	416.4	398.4	380.3	368.4	356.5	349.5	342.5	336.7	330.9
42.5°	457.3	423.4	389.5	371.8	354.1	342.8	331.5	323.3	315.0	311.7	308.3
45°	422.5	392.6	362.6	345.5	328.5	316.5	304.6	297.6	290.6	287.5	284.5
47.5°	391.9	364.2	336.4	319.6	302.8	292.1	281.4	276.0	270.5	266.2	261.9
50°	362.0	335.2	308.3	292.1	276.0	266.8	257.6	250.9	244.2	241.2	238.1
52.5°	333.3	308.9	284.5	268.0	251.5	242.7	233.8	228.0	222.2	215.8	209.4
55°	301.0	279.6	258.2	243.6	228.9	219.8	210.6	203.9	197.2	190.5	183.8
57.5°	274.1	253.1	232.0	218.9	205.7	196.9	188.0	180.7	173.4	167.9	162.4
60°	244.8	226.5	208.2	195.4	182.5	174.0	165.4	158.4	151.4	148.7	145.9
62.5°	217.3	200.2	183.2	171.9	160.6	152.3	144.1	139.5	134.9	133.1	131.3
65°	189.3	174.6	160.0	149.6	139.2	132.2	125.2	123.0	120.9	119.4	117.8
67.5°	163.0	150.5	138.0	128.8	119.7	114.8	109.9	107.4	105.0	103.2	101.3
70°	139.2	128.2	117.2	109.3	101.3	96.8	92.2	90.1	87.9	84.6	81.2
72.5°	113.6	105.0	96.5	90.4	84.3	80.3	76.3	72.0	67.8	64.7	61.7
75°	94.0	85.5	76.9	71.1	65.3	60.7	56.2	54.6	53.1	52.2	51.3
77.5°	72.0	64.7	57.4	52.8	48.2	46.1	44.0	43.0	42.1	41.8	41.5
80°	51.9	45.8	39.7	37.2	34.8	34.2	33.6	33.0	32.4	32.1	31.7
82.5°	32.4	29.3	26.3	25.6	25.0	24.7	24.4	24.1	23.8	23.5	23.2
85°	18.9	17.7	16.5	16.2	15.9	15.6	15.3	15.3	15.3	15.3	15.3
87.5°	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.6	7.3
90°	9.4	11.8	14.5	17.3	20.0	22.7	23.6	24.4	25.3	26.1	26.7
92.5°	33.5	34.7	36.0	37.3	38.5	39.8	40.4	41.0	41.7	42.3	42.4
95°	61.8	63.4	65.0	66.7	68.4	70.1	70.9	71.8	72.6	73.5	73.9
97.5°	96.1	97.3	98.5	99.8	101.0	102.3	103.4	104.4	105.5	106.5	106.9
100°	133.9	135.0	136.1	137.1	138.2	139.3	139.9	140.5	141.1	141.8	142.3
102.5°	174.0	175.0	176.5	178.0	179.5	180.9	181.6	182.2	182.8	183.5	183.7
105°	214.8	216.0	217.9	219.8	221.7	223.6	223.6	223.6	223.6	223.6	223.8
107.5°	263.2	263.8	264.6	265.4	266.3	267.1	267.8	268.4	269.0	269.7	269.9
110°	309.6	310.0	310.4	310.8	311.2	311.7	312.5	313.3	314.2	315.0	315.2



TEST NUMBER: P832213

CATALOG NUMBER: S123RDIP-S560D1195U930-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	356.1	356.2	356.2	356.2	356.2	356.2	357.2	358.3	359.3	360.4	360.9
115°	405.1	405.2	404.8	404.4	404.0	403.5	403.8	404.0	404.2	404.4	404.4
117.5°	451.7	451.6	451.2	450.8	450.4	450.0	450.0	450.0	450.0	450.0	449.6
120°	500.5	500.6	499.5	498.5	497.4	496.4	496.2	496.0	495.7	495.5	495.2
122.5°	545.2	545.4	545.0	544.6	544.2	543.7	543.1	542.5	541.8	541.2	540.6
125°	591.7	591.8	591.4	591.0	590.6	590.2	589.3	588.5	587.6	586.8	585.9
127.5°	637.8	638.3	637.8	637.4	637.0	636.6	635.3	634.0	632.8	631.5	630.5
130°	683.1	683.6	683.0	682.4	681.7	681.1	680.3	679.4	678.6	677.7	676.6
132.5°	726.7	727.3	726.9	726.5	726.0	725.6	724.6	723.5	722.5	721.4	720.4
135°	769.5	770.0	769.8	769.6	769.4	769.2	768.3	767.5	766.7	765.8	765.2
137.5°	809.4	810.2	810.9	811.5	812.1	812.8	811.7	810.7	809.6	808.6	807.7
140°	852.0	852.7	852.9	853.1	853.3	853.5	853.3	853.1	852.9	852.7	851.8
142.5°	890.9	891.6	892.0	892.4	892.9	893.3	893.1	892.9	892.7	892.4	891.8
145°	929.1	929.6	930.2	930.9	931.5	932.1	931.9	931.7	931.5	931.3	930.8
147.5°	965.8	966.5	967.2	967.8	968.4	969.1	969.1	969.1	969.1	969.1	968.4
150°	1001.1	1001.5	1001.9	1002.3	1002.7	1003.2	1003.2	1003.2	1003.2	1003.2	1002.5
152.5°	1032.2	1032.6	1032.9	1033.1	1033.3	1033.5	1033.9	1034.3	1034.7	1035.2	1034.9
155°	1061.9	1062.0	1062.2	1062.4	1062.6	1062.8	1063.7	1064.5	1065.4	1066.2	1065.9
157.5°	1088.5	1088.5	1088.7	1089.0	1089.2	1089.4	1090.2	1091.1	1091.9	1092.7	1092.5
160°	1113.3	1113.1	1113.1	1113.1	1113.1	1113.1	1114.1	1115.2	1116.2	1117.3	1117.4
162.5°	1135.2	1134.9	1135.2	1135.4	1135.6	1135.8	1136.8	1137.9	1138.9	1140.0	1139.8
165°	1154.1	1153.8	1153.8	1153.8	1153.8	1153.8	1155.1	1156.3	1157.6	1158.8	1158.7
167.5°	1169.4	1169.0	1169.3	1169.5	1169.7	1169.9	1171.2	1172.4	1173.7	1174.9	1174.9
170°	1182.6	1182.2	1182.2	1182.2	1182.2	1182.2	1183.7	1185.2	1186.6	1188.1	1188.1
172.5°	1193.0	1192.6	1192.6	1192.6	1192.6	1192.6	1193.9	1195.2	1196.4	1197.7	1197.6
175°	1199.7	1199.3	1199.3	1199.3	1199.3	1199.3	1200.5	1201.8	1203.0	1204.3	1204.2
177.5°	1203.5	1203.0	1203.0	1203.0	1203.0	1203.0	1204.3	1205.6	1206.8	1208.1	1208.0
180°	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9



TEST NUMBER: P832213

CATALOG NUMBER: S123RDIP-S560D1195U930-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1489.0	1489.0	1489.0	1489.0
2.5°	1323.0	1319.9	1318.7	1317.5
5°	1134.0	1124.6	1122.4	1120.3
7.5°	973.5	969.5	956.4	943.2
10°	843.1	830.9	825.4	819.9
12.5°	734.1	722.8	721.0	719.2
15°	649.6	641.6	638.9	636.2
17.5°	594.0	588.5	585.2	581.8
20°	552.8	548.8	546.4	544.0
22.5°	521.4	518.3	516.5	514.7
25°	491.2	486.6	485.0	483.5
27.5°	462.5	458.5	457.0	455.4
30°	435.6	432.2	430.1	428.0
32.5°	406.3	402.3	401.1	399.9
35°	380.3	377.9	376.7	375.5
37.5°	352.9	349.8	348.0	346.2
40°	329.4	327.8	326.9	326.0
42.5°	305.6	302.8	302.5	302.2
45°	281.8	279.0	278.4	277.8
47.5°	259.5	257.0	256.7	256.4
50°	234.7	231.4	228.9	226.5
52.5°	206.4	203.3	201.2	199.0
55°	180.4	177.0	175.2	173.4
57.5°	160.9	159.3	158.4	157.5
60°	145.0	144.1	143.5	142.9
62.5°	130.3	129.4	129.4	129.4
65°	116.9	116.0	115.1	114.2
67.5°	99.5	97.7	97.4	97.1
70°	78.5	75.7	75.4	75.1
72.5°	61.4	61.1	60.4	59.8
75°	50.7	50.1	50.1	50.1
77.5°	40.9	40.3	40.3	40.3
80°	31.4	31.1	31.4	31.7
82.5°	23.2	23.2	22.9	22.6
85°	15.0	14.7	14.7	14.7
87.5°	7.3	7.3	7.3	7.3
90°	27.2	27.6	28.0	28.4
92.5°	42.0	41.6	41.2	40.7
95°	73.9	73.9	73.9	73.9
97.5°	106.7	106.5	106.3	106.1
100°	142.7	143.1	143.6	144.0
102.5°	183.5	183.2	183.0	182.8
105°	224.2	224.6	225.0	225.5
107.5°	269.7	269.4	269.2	269.0
110°	314.8	314.4	314.0	313.5



TEST NUMBER: P832213

CATALOG NUMBER: S123RDIP-S560D1195U930-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	360.9	360.9	360.9	360.9
115°	404.2	404.0	403.8	403.5
117.5°	449.0	448.4	447.7	447.1
120°	494.8	494.4	494.0	493.5
122.5°	539.9	539.3	538.7	538.1
125°	585.1	584.3	583.4	582.6
127.5°	629.6	628.8	627.9	627.1
130°	675.1	673.6	672.1	670.7
132.5°	719.3	718.2	717.2	716.1
135°	764.8	764.3	763.9	763.5
137.5°	807.1	806.5	805.8	805.2
140°	850.3	848.9	847.4	845.9
142.5°	890.8	889.7	888.7	887.6
145°	929.9	929.1	928.2	927.4
147.5°	967.2	965.9	964.6	963.4
150°	1001.3	1000.0	998.7	997.5
152.5°	1033.8	1032.7	1031.7	1030.6
155°	1064.4	1063.0	1061.5	1060.0
157.5°	1091.3	1090.0	1088.7	1087.5
160°	1116.5	1115.7	1114.8	1114.0
162.5°	1138.3	1136.8	1135.4	1133.9
165°	1157.3	1155.8	1154.3	1152.8
167.5°	1173.7	1172.4	1171.2	1169.9
170°	1186.6	1185.2	1183.7	1182.2
172.5°	1196.1	1194.6	1193.2	1191.7
175°	1202.7	1201.3	1199.8	1198.3
177.5°	1206.5	1205.0	1203.6	1202.1
180°	1205.9	1205.9	1205.9	1205.9

TEST NUMBER: P832213

CATALOG NUMBER: S123RDIP-S560D1195U930-4F0-1E-UDD-G1

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	9.04	9.76	10.11	10.83	12.28	13.71	14.43	14.78	15.49	16.94
	3H	10.26	10.90	11.34	11.98	13.44	15.20	15.84	16.28	16.92	18.38
	4H	10.63	11.24	11.72	12.32	13.79	15.69	16.29	16.78	17.37	18.84
	6H	10.91	11.47	12.01	12.55	14.03	15.99	16.55	17.09	17.63	19.11
	8H	10.99	11.53	12.10	12.62	14.10	16.07	16.60	17.17	17.69	19.17
	12H	11.04	11.55	12.15	12.64	14.14	16.10	16.60	17.20	17.69	19.19
4H	2H	9.75	10.36	10.85	11.44	12.91	13.69	14.30	14.79	15.38	16.85
	3H	11.12	11.62	12.22	12.72	14.21	15.34	15.85	16.44	16.95	18.43
	4H	11.57	12.03	12.67	13.12	14.63	15.94	16.41	17.05	17.50	19.01
	6H	11.93	12.33	13.04	13.44	14.94	16.37	16.77	17.49	17.89	19.39
	8H	12.05	12.42	13.16	13.53	15.04	16.50	16.88	17.62	17.98	19.50
	12H	12.12	12.46	13.25	13.58	15.10	16.56	16.90	17.69	18.02	19.54
8H	4H	11.87	12.24	12.99	13.35	14.86	15.90	16.27	17.02	17.38	18.89
	6H	12.33	12.64	13.47	13.79	15.30	16.39	16.70	17.53	17.85	19.36
	8H	12.52	12.79	13.67	13.92	15.45	16.58	16.85	17.72	17.98	19.51
	12H	12.66	12.90	13.81	14.02	15.59	16.69	16.93	17.84	18.05	19.62
12H	4H	11.88	12.21	13.01	13.33	14.85	15.85	16.18	16.98	17.30	18.82
	6H	12.39	12.66	13.53	13.79	15.32	16.37	16.64	17.51	17.77	19.30
	8H	12.60	12.84	13.75	13.97	15.53	16.56	16.79	17.70	17.92	19.49