

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: P832239

Luminaire Tested: S123RDIP-S560D365U930-4F0-1E-UDD-G

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P832239  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 05/03/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-S560D365U930-4F0-1E-UDD-G  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 560 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 365 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: -

**Summary**

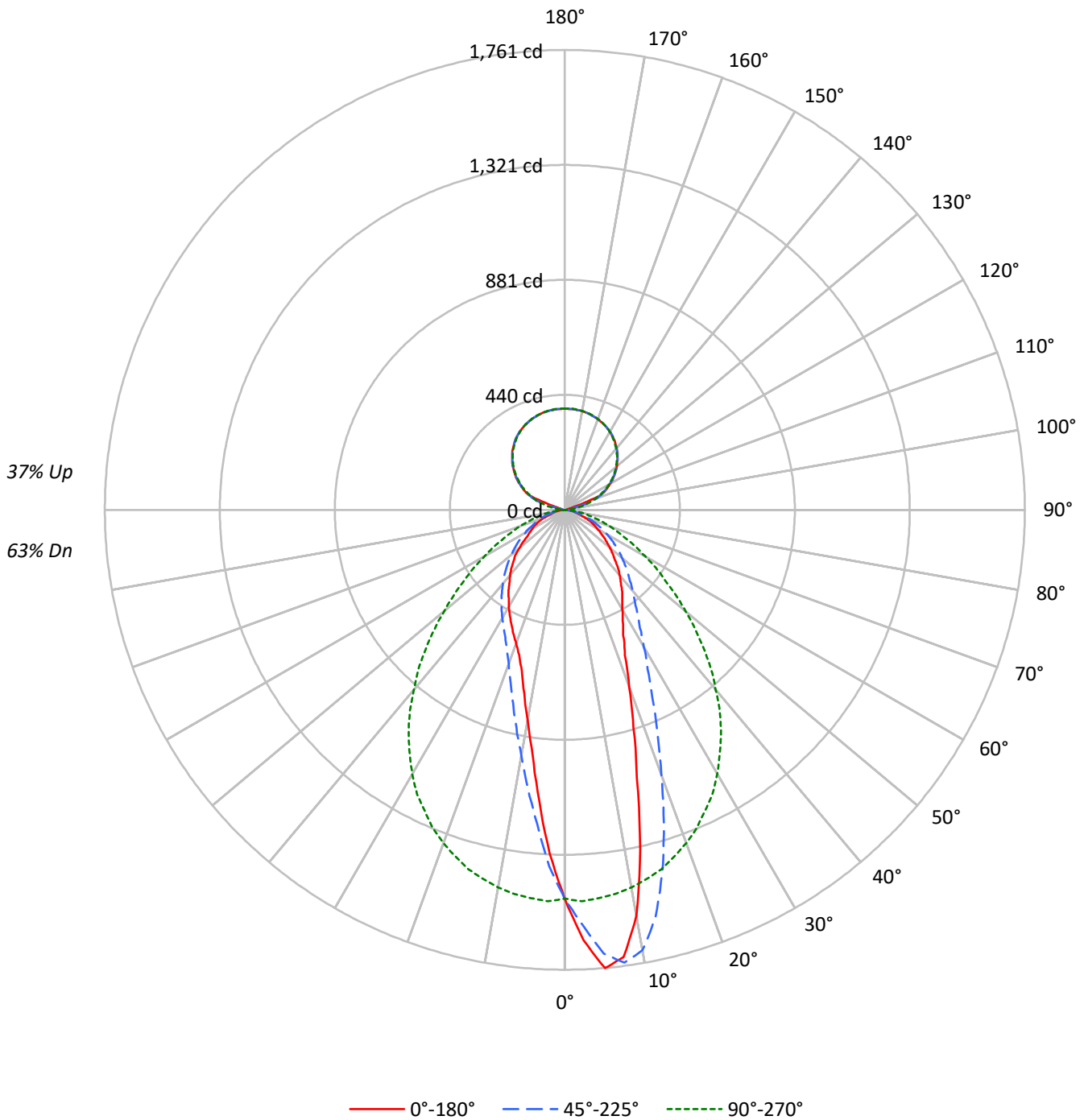
Lumens per Lamp: N/A  
Luminaire Lumens: 3157.1 lumens  
Efficiency: N/A  
Efficacy: 106.7 lumens/watt  
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8  
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 29.6  
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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	68	68	68	63				
1	102	98	94	91	95	92	89	86	81	78	76	71	69	67	61	60	59	55				
2	93	86	81	76	87	81	76	72	72	68	65	63	60	58	55	53	51	47				
3	86	77	70	65	80	73	67	62	65	60	56	57	53	50	50	47	45	42				
4	79	69	62	56	74	65	59	53	58	53	49	52	48	44	46	42	40	37				
5	73	62	55	49	69	59	52	47	53	47	43	47	43	39	42	38	36	33				
6	68	57	49	43	64	54	47	42	48	43	38	43	39	35	38	35	32	30				
7	63	52	44	39	60	49	42	37	44	39	35	40	35	32	36	32	29	27				
8	59	47	40	35	56	45	38	34	41	35	31	37	32	29	33	29	27	25				
9	56	44	37	32	52	42	35	31	38	32	29	34	30	27	31	27	25	23				
10	52	41	34	29	49	39	32	28	35	30	26	32	28	24	29	25	23	21				

**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	4.3
10°-20°	314.1	9.9
20°-30°	360.3	11.4
30°-40°	355.2	11.2
40°-50°	313.2	9.9
50°-60°	241.0	7.6
60°-70°	158.4	5.0
70°-80°	76.9	2.4
80°-90°	20.2	0.6
90°-100°	13.7	0.4
100°-110°	66.1	2.1
110°-120°	162.0	5.1
120°-130°	205.7	6.5
130°-140°	219.7	7.0
140°-150°	205.5	6.5
150°-160°	165.7	5.2
160°-170°	106.9	3.4
170°-180°	36.9	1.2
0°-30°	810.1	25.7
0°-40°	1165.3	36.9
0°-60°	1719.5	54.5
0°-90°	1975.0	62.6
90°-120°	241.8	7.7
90°-150°	872.6	27.6
90°-180°	1182.0	37.4
0°-180°	3157.1	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°	9	7	0	7	9	5
95°	11	9	18	9	11	9
105°	13	63	86	63	13	26
115°	169	165	161	165	169	159
125°	232	230	227	230	232	207
135°	286	286	283	286	286	220
145°	329	329	326	329	329	206
155°	359	359	359	359	359	165
165°	378	378	379	378	378	107
175°	386	387	388	387	386	37
180°	388	388	388	388	388	



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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°	8.6	8.5	8.4	8.3	8.1	7.9	7.7	7.4	7.2	6.9	6.1
92.5°	9.8	9.7	9.7	9.6	9.5	9.3	8.8	8.4	7.9	7.5	6.9
95°	10.9	10.9	10.9	10.9	10.9	10.7	10.3	9.8	9.4	8.9	8.2
97.5°	11.8	11.7	11.7	11.6	11.6	11.3	10.8	10.2	9.7	9.2	12.5
100°	12.1	12.0	12.0	11.9	11.8	11.6	11.0	10.5	10.0	9.5	19.5
102.5°	12.4	12.3	12.1	12.0	11.9	12.9	15.0	17.1	19.2	21.3	32.5
105°	12.7	12.5	12.4	12.3	12.2	17.8	29.1	40.4	51.8	63.1	68.9
107.5°	30.0	38.3	46.7	55.1	63.5	72.6	82.5	92.4	102.2	112.1	111.1
110°	79.2	88.4	97.5	106.7	115.8	121.5	123.6	125.7	127.8	129.9	129.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	150.1	150.2	150.4	150.5	150.6	150.4	149.8	149.2	148.7	148.1	147.4
115°	169.4	169.1	168.9	168.6	168.4	167.9	167.3	166.7	166.0	165.4	164.8
117.5°	185.0	184.9	184.8	184.8	184.7	184.4	183.9	183.4	182.9	182.4	182.0
120°	201.1	201.1	201.1	201.1	201.1	200.8	200.3	199.8	199.3	198.8	198.6
122.5°	216.9	216.9	216.8	216.7	216.7	216.5	216.2	215.9	215.5	215.2	215.0
125°	231.6	231.5	231.4	231.2	231.1	231.0	230.9	230.7	230.6	230.5	230.2
127.5°	246.0	246.2	246.3	246.4	246.6	246.5	246.3	246.1	245.9	245.8	245.4
130°	259.9	260.0	260.1	260.3	260.4	260.3	260.1	259.8	259.5	259.3	259.0
132.5°	272.5	272.7	272.9	273.1	273.3	273.3	273.0	272.8	272.5	272.3	272.1
135°	285.5	285.7	285.9	286.1	286.3	286.3	286.1	285.9	285.7	285.5	285.3
137.5°	297.9	298.0	298.2	298.3	298.4	298.3	298.0	297.7	297.4	297.0	296.9
140°	308.8	309.0	309.1	309.2	309.4	309.3	309.0	308.8	308.5	308.3	308.1
142.5°	318.9	319.1	319.3	319.5	319.7	319.7	319.5	319.3	319.1	318.9	318.7
145°	329.3	329.3	329.3	329.3	329.3	329.2	329.1	329.0	328.9	328.7	328.6
147.5°	336.8	337.1	337.4	337.8	338.1	338.2	338.0	337.9	337.8	337.7	337.5
150°	345.4	345.6	345.8	346.0	346.2	346.2	346.1	346.0	345.8	345.7	345.6
152.5°	352.3	352.7	353.0	353.3	353.6	353.7	353.4	353.1	352.9	352.6	352.6
155°	358.7	359.1	359.5	359.8	360.2	360.3	359.9	359.6	359.3	359.0	358.9
157.5°	364.2	364.7	365.2	365.7	366.2	366.3	365.9	365.5	365.1	364.7	364.8
160°	369.3	369.8	370.2	370.7	371.1	371.2	370.8	370.4	370.0	369.6	369.7
162.5°	374.2	374.6	375.0	375.4	375.8	375.7	375.3	374.9	374.4	374.0	374.0
165°	378.0	378.4	378.9	379.3	379.8	379.7	379.2	378.7	378.2	377.7	377.8
167.5°	380.9	381.4	381.9	382.4	382.9	382.9	382.4	381.9	381.4	380.9	380.9
170°	383.5	384.0	384.5	385.0	385.5	385.5	385.0	384.5	384.0	383.5	383.5
172.5°	384.9	385.5	386.1	386.6	387.2	387.2	386.7	386.2	385.7	385.2	385.1
175°	386.3	386.9	387.4	387.9	388.4	388.4	388.0	387.5	387.1	386.6	386.6
177.5°	386.6	387.3	387.9	388.6	389.2	389.3	388.7	388.2	387.7	387.2	387.1
180°	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8



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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°	5.2	4.4	3.6	2.8	2.2	1.6	0.9	0.3	0.9	1.6	2.2
92.5°	6.3	5.8	5.2	5.1	5.5	5.9	6.2	6.6	6.2	5.9	5.5
95°	7.5	6.8	6.1	7.1	9.7	12.3	14.9	17.6	14.9	12.3	9.7
97.5°	15.7	19.0	22.3	24.8	26.6	28.4	30.2	32.0	30.2	28.4	26.6
100°	29.5	39.5	49.5	53.8	52.5	51.3	50.0	48.7	50.0	51.3	52.5
102.5°	43.6	54.7	65.9	71.0	70.2	69.4	68.5	67.7	68.5	69.4	70.2
105°	74.6	80.4	86.1	88.7	88.0	87.3	86.6	85.9	86.6	87.3	88.0
107.5°	110.2	109.2	108.2	107.5	106.9	106.3	105.7	105.2	105.7	106.3	106.9
110°	128.5	127.8	127.1	126.5	126.0	125.5	125.0	124.5	125.0	125.5	126.0





TEST NUMBER: P832239

CATALOG NUMBER: S123RDIP-S560D365U930-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	146.7	146.0	145.3	144.7	144.2	143.8	143.3	142.9	143.3	143.8	144.2
115°	164.2	163.6	163.1	162.6	162.2	161.8	161.4	161.0	161.4	161.8	162.2
117.5°	181.7	181.4	181.1	180.7	180.3	179.8	179.4	178.9	179.4	179.8	180.3
120°	198.4	198.2	198.0	197.6	197.1	196.5	195.9	195.3	195.9	196.5	197.1
122.5°	214.7	214.4	214.2	213.8	213.4	212.9	212.5	212.0	212.5	212.9	213.4
125°	230.0	229.7	229.5	229.1	228.6	228.0	227.5	227.0	227.5	228.0	228.6
127.5°	245.1	244.8	244.5	244.1	243.5	243.0	242.5	242.0	242.5	243.0	243.5
130°	258.8	258.5	258.3	257.9	257.4	256.9	256.3	255.8	256.3	256.9	257.4
132.5°	271.9	271.7	271.5	271.1	270.6	270.1	269.6	269.1	269.6	270.1	270.6
135°	285.0	284.7	284.5	284.2	283.8	283.4	283.0	282.6	283.0	283.4	283.8
137.5°	296.8	296.6	296.5	296.2	295.7	295.2	294.7	294.2	294.7	295.2	295.7
140°	307.9	307.7	307.5	307.2	306.8	306.4	306.1	305.7	306.1	306.4	306.8
142.5°	318.5	318.4	318.2	317.9	317.5	317.1	316.7	316.3	316.7	317.1	317.5
145°	328.5	328.3	328.2	327.9	327.5	327.0	326.6	326.1	326.6	327.0	327.5
147.5°	337.4	337.3	337.1	336.9	336.6	336.3	336.0	335.6	336.0	336.3	336.6
150°	345.5	345.3	345.2	345.0	344.9	344.7	344.5	344.3	344.5	344.7	344.9
152.5°	352.5	352.4	352.4	352.3	352.3	352.2	352.1	352.1	352.1	352.2	352.3
155°	358.8	358.8	358.7	358.8	358.9	359.0	359.1	359.3	359.1	359.0	358.9
157.5°	364.9	364.9	365.0	365.0	365.0	365.0	365.0	365.0	365.0	365.0	365.0
160°	369.8	369.8	369.9	370.0	370.0	370.1	370.1	370.2	370.1	370.1	370.0
162.5°	374.1	374.1	374.2	374.3	374.5	374.7	374.9	375.1	374.9	374.7	374.5
165°	377.8	377.9	378.0	378.1	378.3	378.5	378.7	378.9	378.7	378.5	378.3
167.5°	380.9	380.9	380.9	381.0	381.3	381.5	381.8	382.0	381.8	381.5	381.3
170°	383.5	383.5	383.5	383.6	383.8	384.1	384.4	384.6	384.4	384.1	383.8
172.5°	385.1	385.0	384.9	385.1	385.4	385.7	386.0	386.3	386.0	385.7	385.4
175°	386.5	386.4	386.4	386.5	386.8	387.1	387.5	387.8	387.5	387.1	386.8
177.5°	387.1	387.0	387.0	387.1	387.4	387.7	388.0	388.4	388.0	387.7	387.4
180°	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8



TEST NUMBER: P832239

CATALOG NUMBER: S123RDIP-S560D365U930-4F0-1E-UDD-G

**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°	2.8	3.6	4.4	5.2	6.1	6.9	7.2	7.4	7.7	7.9	8.1
92.5°	5.1	5.2	5.8	6.3	6.9	7.5	7.9	8.4	8.8	9.3	9.5
95°	7.1	6.1	6.8	7.5	8.2	8.9	9.4	9.8	10.3	10.7	10.9
97.5°	24.8	22.3	19.0	15.7	12.5	9.2	9.7	10.2	10.8	11.3	11.6
100°	53.8	49.5	39.5	29.5	19.5	9.5	10.0	10.5	11.0	11.6	11.8
102.5°	71.0	65.9	54.7	43.6	32.5	21.3	19.2	17.1	15.0	12.9	11.9
105°	88.7	86.1	80.4	74.6	68.9	63.1	51.8	40.4	29.1	17.8	12.2
107.5°	107.5	108.2	109.2	110.2	111.1	112.1	102.2	92.4	82.5	72.6	63.5
110°	126.5	127.1	127.8	128.5	129.2	129.9	127.8	125.7	123.6	121.5	115.8



TEST NUMBER: P832239

CATALOG NUMBER: S123RDIP-S560D365U930-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	144.7	145.3	146.0	146.7	147.4	148.1	148.7	149.2	149.8	150.4	150.6
115°	162.6	163.1	163.6	164.2	164.8	165.4	166.0	166.7	167.3	167.9	168.4
117.5°	180.7	181.1	181.4	181.7	182.0	182.4	182.9	183.4	183.9	184.4	184.7
120°	197.6	198.0	198.2	198.4	198.6	198.8	199.3	199.8	200.3	200.8	201.1
122.5°	213.8	214.2	214.4	214.7	215.0	215.2	215.5	215.9	216.2	216.5	216.7
125°	229.1	229.5	229.7	230.0	230.2	230.5	230.6	230.7	230.9	231.0	231.1
127.5°	244.1	244.5	244.8	245.1	245.4	245.8	245.9	246.1	246.3	246.5	246.6
130°	257.9	258.3	258.5	258.8	259.0	259.3	259.5	259.8	260.1	260.3	260.4
132.5°	271.1	271.5	271.7	271.9	272.1	272.3	272.5	272.8	273.0	273.3	273.3
135°	284.2	284.5	284.7	285.0	285.3	285.5	285.7	285.9	286.1	286.3	286.3
137.5°	296.2	296.5	296.6	296.8	296.9	297.0	297.4	297.7	298.0	298.3	298.4
140°	307.2	307.5	307.7	307.9	308.1	308.3	308.5	308.8	309.0	309.3	309.4
142.5°	317.9	318.2	318.4	318.5	318.7	318.9	319.1	319.3	319.5	319.7	319.7
145°	327.9	328.2	328.3	328.5	328.6	328.7	328.9	329.0	329.1	329.2	329.3
147.5°	336.9	337.1	337.3	337.4	337.5	337.7	337.8	337.9	338.0	338.2	338.1
150°	345.0	345.2	345.3	345.5	345.6	345.7	345.8	346.0	346.1	346.2	346.2
152.5°	352.3	352.4	352.4	352.5	352.6	352.6	352.9	353.1	353.4	353.7	353.6
155°	358.8	358.7	358.8	358.8	358.9	359.0	359.3	359.6	359.9	360.3	360.2
157.5°	365.0	365.0	364.9	364.9	364.8	364.7	365.1	365.5	365.9	366.3	366.2
160°	370.0	369.9	369.8	369.8	369.7	369.6	370.0	370.4	370.8	371.2	371.1
162.5°	374.3	374.2	374.1	374.1	374.0	374.0	374.4	374.9	375.3	375.7	375.8
165°	378.1	378.0	377.9	377.8	377.8	377.7	378.2	378.7	379.2	379.7	379.8
167.5°	381.0	380.9	380.9	380.9	380.9	380.9	381.4	381.9	382.4	382.9	382.9
170°	383.6	383.5	383.5	383.5	383.5	383.5	384.0	384.5	385.0	385.5	385.5
172.5°	385.1	384.9	385.0	385.1	385.1	385.2	385.7	386.2	386.7	387.2	387.2
175°	386.5	386.4	386.4	386.5	386.6	386.6	387.1	387.5	388.0	388.4	388.4
177.5°	387.1	387.0	387.0	387.1	387.1	387.2	387.7	388.2	388.7	389.3	389.2
180°	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8



TEST NUMBER: P832239

CATALOG NUMBER: S123RDIP-S560D365U930-4F0-1E-UDD-G

**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°	8.3	8.4	8.5	8.6
92.5°	9.6	9.7	9.7	9.8
95°	10.9	10.9	10.9	10.9
97.5°	11.6	11.7	11.7	11.8
100°	11.9	12.0	12.0	12.1
102.5°	12.0	12.1	12.3	12.4
105°	12.3	12.4	12.5	12.7
107.5°	55.1	46.7	38.3	30.0
110°	106.7	97.5	88.4	79.2



TEST NUMBER: P832239

CATALOG NUMBER: S123RDIP-S560D365U930-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	150.5	150.4	150.2	150.1
115°	168.6	168.9	169.1	169.4
117.5°	184.8	184.8	184.9	185.0
120°	201.1	201.1	201.1	201.1
122.5°	216.7	216.8	216.9	216.9
125°	231.2	231.4	231.5	231.6
127.5°	246.4	246.3	246.2	246.0
130°	260.3	260.1	260.0	259.9
132.5°	273.1	272.9	272.7	272.5
135°	286.1	285.9	285.7	285.5
137.5°	298.3	298.2	298.0	297.9
140°	309.2	309.1	309.0	308.8
142.5°	319.5	319.3	319.1	318.9
145°	329.3	329.3	329.3	329.3
147.5°	337.8	337.4	337.1	336.8
150°	346.0	345.8	345.6	345.4
152.5°	353.3	353.0	352.7	352.3
155°	359.8	359.5	359.1	358.7
157.5°	365.7	365.2	364.7	364.2
160°	370.7	370.2	369.8	369.3
162.5°	375.4	375.0	374.6	374.2
165°	379.3	378.9	378.4	378.0
167.5°	382.4	381.9	381.4	380.9
170°	385.0	384.5	384.0	383.5
172.5°	386.6	386.1	385.5	384.9
175°	387.9	387.4	386.9	386.3
177.5°	388.6	387.9	387.3	386.6
180°	387.8	387.8	387.8	387.8

TEST NUMBER: P832239

CATALOG NUMBER: S123RDIP-S560D365U930-4F0-1E-UDD-G

**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	11.49	12.41	12.35	13.27	14.36	16.16	17.07	17.01	17.94	19.02
	3H	12.72	13.54	13.59	14.41	15.52	17.66	18.48	18.53	19.36	20.47
	4H	13.11	13.88	13.99	14.76	15.88	18.16	18.93	19.04	19.81	20.93
	6H	13.39	14.10	14.28	14.99	16.12	18.47	19.18	19.37	20.07	21.20
	8H	13.48	14.15	14.38	15.06	16.19	18.55	19.23	19.46	20.13	21.27
	12H	13.53	14.17	14.44	15.07	16.23	18.59	19.23	19.49	20.13	21.29
4H	2H	12.23	13.00	13.11	13.88	15.00	16.16	16.93	17.05	17.81	18.94
	3H	13.60	14.24	14.50	15.16	16.29	17.83	18.47	18.72	19.38	20.52
	4H	14.06	14.64	14.97	15.55	16.72	18.44	19.02	19.35	19.93	21.09
	6H	14.43	14.93	15.36	15.87	17.03	18.88	19.38	19.80	20.31	21.48
	8H	14.56	15.02	15.48	15.95	17.13	19.01	19.48	19.94	20.41	21.58
	12H	14.64	15.06	15.58	16.00	17.19	19.08	19.50	20.02	20.44	21.63
8H	4H	14.38	14.85	15.31	15.78	16.95	18.41	18.88	19.33	19.80	20.98
	6H	14.85	15.23	15.80	16.20	17.38	18.91	19.29	19.86	20.26	21.44
	8H	15.04	15.38	16.00	16.34	17.53	19.10	19.43	20.06	20.40	21.59
	12H	15.18	15.48	16.14	16.43	17.68	19.21	19.51	20.18	20.47	21.71
12H	4H	14.40	14.81	15.34	15.76	16.94	18.36	18.78	19.31	19.73	20.91
	6H	14.91	15.24	15.87	16.21	17.40	18.88	19.22	19.84	20.18	21.38
	8H	15.13	15.43	16.09	16.38	17.62	19.08	19.38	20.04	20.33	21.58