

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: P831814

Luminaire Tested: S123RDIP-S1000D1195U940-4F0-1E-UDD-G1

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831814
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-S1000D1195U940-4F0-1E-UDD-G1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: -

Summary

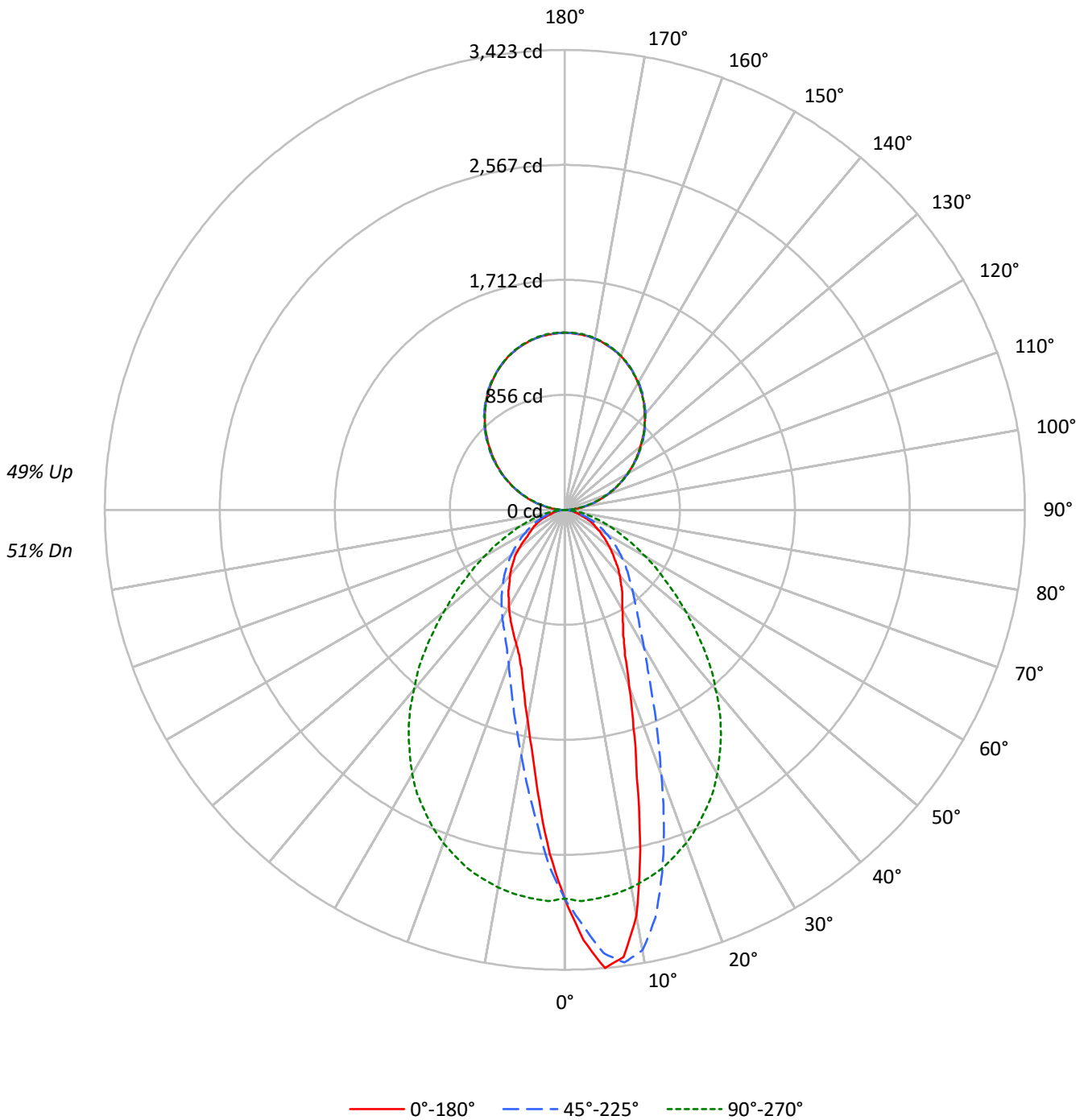
Lumens per Lamp: N/A
Luminaire Lumens: 7493.7 lumens
Efficiency: N/A
Efficacy: 113.4 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 66.1
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	50	30	10	50	30	10	0				
RCR																															
0	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51					51								
1	99	95	91	88	91	88	85	82	75	73	71	63	61	60	52	51	50	45					45								
2	91	84	78	73	84	78	73	69	67	63	60	56	54	51	47	45	43	39					39								
3	83	75	68	62	77	69	63	59	60	55	51	51	47	45	42	40	38	34					34								
4	77	67	59	54	71	62	56	51	54	49	45	46	42	39	38	36	34	30					30								
5	71	60	52	47	66	56	49	44	49	43	39	42	38	35	35	32	30	27					27								
6	66	54	47	41	61	51	44	39	44	39	35	38	34	31	32	29	27	24					24								
7	61	49	42	37	57	46	40	35	41	35	31	35	31	28	30	27	25	22					22								
8	57	45	38	33	53	42	36	31	37	32	28	32	28	25	28	25	22	20					20								
9	53	42	34	30	49	39	33	28	34	29	26	30	26	23	26	23	21	19					19								
10	50	38	32	27	46	36	30	26	32	27	23	28	24	21	24	21	19	17					17								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	31146	31146	31146	31146	31146
5°	36983	35804	31342	25337	23523
10°	33507	36366	31186	20300	17415
15°	23071	31181	30857	16592	13776
20°	16049	24007	30237	13991	12109
25°	12231	18296	29337	12435	11159
30°	10647	14628	28209	11545	10337
35°	9775	12339	26612	10796	9587
40°	8918	11019	24522	10061	8901
45°	8054	10077	22267	9363	8217
50°	7311	9297	19609	8683	7371
55°	6613	8539	17055	8015	6322
60°	5924	7765	14813	7279	5976
65°	5468	6890	12753	6543	5652
70°	4444	5954	11125	5917	4592
75°	3897	4737	9424	4907	4047
80°	3527	4011	7724	4116	3825
85°	3223	3520	5866	3742	3520

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 23496 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	263.7	3.5
10°-20°	610.3	8.1
20°-30°	700.2	9.3
30°-40°	690.2	9.2
40°-50°	608.7	8.1
50°-60°	468.3	6.2
60°-70°	307.9	4.1
70°-80°	149.5	2.0
80°-90°	40.5	0.5
90°-100°	84.9	1.1
100°-110°	257.0	3.4
110°-120°	437.5	5.8
120°-130°	575.5	7.7
130°-140°	646.9	8.6
140°-150°	636.0	8.5
150°-160°	535.4	7.1
160°-170°	356.4	4.8
170°-180°	124.8	1.7
0°-30°	1574.3	21.0
0°-40°	2264.5	30.2
0°-60°	3341.4	44.6
0°-90°	3839.3	51.2
90°-120°	779.3	10.4
90°-150°	2637.7	35.2
90°-180°	3654.0	48.8
0°-180°	7493.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2894	2894	2894	2894	2894	
5°	3423	3314	2901	2345	2177	313
15°	2070	2798	2769	1489	1236	584
25°	1030	1540	2470	1047	940	486
35°	744	939	2025	822	730	464
45°	529	662	1463	615	540	411
55°	352	455	909	427	337	316
65°	215	270	501	257	222	210
75°	94	114	227	118	97	101
85°	26	28	48	30	28	28
90°	31	25	1	25	31	16
95°	81	77	61	77	81	81
105°	247	244	233	244	247	261
115°	441	441	440	441	441	437
125°	637	646	644	646	637	570
135°	835	841	836	841	835	642
145°	1014	1020	1014	1020	1014	634
155°	1159	1162	1161	1162	1159	534
165°	1261	1262	1265	1262	1261	356
175°	1311	1312	1316	1312	1311	125
180°	1319	1319	1319	1319	1319	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2893.6	2893.6	2893.6	2893.6	2893.6	2893.6	2893.6	2893.6	2893.6	2893.6	2893.6
2.5°	3206.8	3196.7	3186.7	3183.7	3180.7	3171.2	3161.7	3140.4	3119.0	3097.1	3075.1
5°	3422.8	3423.9	3425.1	3422.2	3419.2	3406.7	3394.3	3368.2	3342.1	3313.6	3285.1
7.5°	3356.3	3375.3	3394.3	3397.8	3401.4	3410.9	3420.4	3414.4	3408.5	3397.8	3387.2
10°	3065.6	3064.5	3063.3	3084.6	3106.0	3169.5	3232.9	3265.6	3298.2	3327.2	3356.3
12.5°	2591.1	2592.9	2594.6	2664.6	2734.6	2794.6	2854.5	2937.5	3020.6	3110.1	3199.7
15°	2070.3	2099.3	2128.4	2190.7	2253.0	2343.1	2433.3	2544.8	2656.3	2798.1	2939.9
17.5°	1700.1	1712.6	1725.0	1784.9	1844.8	1930.3	2015.7	2142.0	2268.4	2451.1	2633.8
20°	1401.1	1412.4	1423.7	1467.0	1510.3	1592.1	1674.0	1794.4	1914.8	2095.8	2276.7
22.5°	1169.8	1191.7	1213.7	1242.7	1271.8	1331.1	1390.5	1513.2	1636.0	1800.9	1965.9
25°	1029.8	1039.9	1050.0	1074.9	1099.8	1156.7	1213.7	1295.0	1376.2	1540.5	1704.9
27.5°	934.9	937.8	940.8	959.2	977.6	1014.4	1051.1	1126.5	1201.8	1337.1	1472.3
30°	856.6	861.9	867.3	881.5	895.7	922.4	949.1	1002.5	1055.9	1176.9	1297.9
32.5°	796.1	799.0	802.0	813.9	825.7	845.3	864.9	907.0	949.1	1041.7	1134.2
35°	743.9	744.5	745.1	754.0	762.9	781.8	800.8	835.8	870.8	939.0	1007.2
37.5°	684.6	688.7	692.9	699.4	705.9	722.5	739.1	767.6	796.1	852.4	908.8
40°	634.7	638.3	641.8	649.6	657.3	670.3	683.4	709.5	735.6	784.2	832.8
42.5°	584.9	587.3	589.6	597.4	605.1	621.1	637.1	657.9	678.6	719.0	759.3
45°	529.1	535.1	541.0	549.3	557.6	571.2	584.9	606.2	627.6	662.0	696.4
47.5°	482.9	485.8	488.8	495.9	503.0	519.6	536.3	555.2	574.2	606.2	638.3
50°	436.6	437.8	439.0	445.5	452.0	466.8	481.7	503.6	525.6	555.2	584.9
52.5°	392.7	395.7	398.6	405.2	411.7	421.8	431.8	454.4	476.9	506.0	535.1
55°	352.4	354.1	355.9	360.7	365.4	377.3	389.1	408.7	428.3	455.0	481.7
57.5°	314.4	316.8	319.1	322.7	326.3	336.9	347.6	364.8	382.0	408.7	435.4
60°	275.2	278.2	281.2	285.3	289.5	297.8	306.1	321.5	336.9	360.7	384.4
62.5°	246.8	247.4	248.0	251.5	255.1	261.0	266.9	279.4	291.9	315.6	339.3
65°	214.7	216.5	218.3	220.1	221.9	226.6	231.3	242.0	252.7	270.5	288.3
67.5°	181.5	183.3	185.1	188.0	191.0	195.2	199.3	206.4	213.6	230.2	246.8
70°	141.2	141.2	141.2	145.9	150.7	157.8	164.9	170.2	175.6	189.2	202.9
72.5°	115.1	115.7	116.3	116.9	117.5	121.6	125.8	134.7	143.6	151.9	160.2
75°	93.7	94.3	94.9	95.5	96.1	97.3	98.5	101.4	104.4	113.9	123.4
77.5°	74.7	75.3	75.9	76.5	77.1	78.3	79.5	80.7	81.9	85.4	89.0
80°	56.9	57.5	58.1	58.7	59.3	59.9	60.5	61.7	62.9	64.7	66.4
82.5°	41.5	41.5	41.5	41.5	41.5	42.7	43.9	43.9	43.9	45.1	46.3
85°	26.1	26.1	26.1	26.7	27.3	27.3	27.3	27.9	28.5	28.5	28.5
87.5°	11.9	11.3	10.7	11.3	11.9	11.9	11.9	12.5	13.1	13.1	13.1
90°	31.1	30.6	30.2	29.7	29.2	28.5	27.6	26.7	25.8	24.9	21.9
92.5°	44.6	45.0	45.5	45.9	46.4	46.3	45.6	44.9	44.2	43.5	42.1
95°	80.8	80.8	80.8	80.8	80.8	80.4	79.4	78.5	77.6	76.7	74.8
97.5°	116.0	116.3	116.5	116.7	117.0	116.5	115.3	114.2	113.0	111.9	110.5
100°	157.5	157.0	156.6	156.1	155.6	155.1	154.4	153.7	153.0	152.3	151.1
102.5°	200.0	200.2	200.4	200.7	200.9	200.7	200.0	199.3	198.6	197.9	196.3
105°	246.6	246.1	245.7	245.2	244.7	244.5	244.5	244.5	244.5	244.5	242.4
107.5°	294.2	294.5	294.7	294.9	295.2	294.9	294.2	293.6	292.9	292.2	291.2
110°	342.9	343.4	343.9	344.3	344.8	344.5	343.6	342.7	341.8	340.9	340.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	394.7	394.7	394.7	394.7	394.7	394.2	393.0	391.9	390.7	389.6	389.6
115°	441.4	441.6	441.8	442.1	442.3	442.3	442.1	441.8	441.6	441.4	441.8
117.5°	489.0	489.7	490.4	491.1	491.8	492.1	492.1	492.1	492.1	492.1	492.6
120°	539.8	540.2	540.7	541.2	541.6	542.0	542.2	542.4	542.7	542.9	544.0
122.5°	588.5	589.2	589.9	590.6	591.2	591.9	592.6	593.3	594.0	594.7	595.2
125°	637.2	638.1	639.0	639.9	640.9	641.8	642.7	643.6	644.5	645.5	645.9
127.5°	685.9	686.8	687.7	688.6	689.6	690.7	692.1	693.5	694.9	696.2	696.7
130°	733.5	735.1	736.8	738.4	740.0	741.2	742.2	743.1	744.0	744.9	745.6
132.5°	783.3	784.4	785.6	786.7	787.9	789.0	790.2	791.3	792.5	793.6	794.1
135°	835.1	835.5	836.0	836.4	836.9	837.6	838.5	839.4	840.4	841.3	841.5
137.5°	880.7	881.3	882.0	882.7	883.4	884.3	885.5	886.6	887.8	888.9	888.3
140°	925.2	926.8	928.4	930.0	931.6	932.6	932.8	933.0	933.3	933.5	933.3
142.5°	970.8	971.9	973.1	974.2	975.4	976.1	976.3	976.5	976.8	977.0	976.5
145°	1014.3	1015.2	1016.1	1017.1	1018.0	1018.6	1018.8	1019.0	1019.3	1019.5	1018.8
147.5°	1053.7	1055.1	1056.4	1057.8	1059.2	1059.9	1059.9	1059.9	1059.9	1059.9	1059.2
150°	1091.0	1092.4	1093.7	1095.1	1096.5	1097.2	1097.2	1097.2	1097.2	1097.2	1096.7
152.5°	1127.2	1128.4	1129.5	1130.7	1131.8	1132.2	1131.7	1131.3	1130.8	1130.3	1130.1
155°	1159.4	1161.0	1162.6	1164.2	1165.8	1166.1	1165.2	1164.3	1163.4	1162.5	1162.2
157.5°	1189.4	1190.8	1192.2	1193.5	1194.9	1195.2	1194.2	1193.3	1192.4	1191.5	1191.2
160°	1218.4	1219.3	1220.3	1221.2	1222.1	1222.0	1220.8	1219.7	1218.5	1217.4	1217.4
162.5°	1240.2	1241.8	1243.4	1245.0	1246.6	1246.8	1245.7	1244.5	1243.4	1242.2	1242.0
165°	1260.9	1262.5	1264.1	1265.7	1267.3	1267.4	1266.1	1264.7	1263.3	1261.9	1261.9
167.5°	1279.5	1280.9	1282.3	1283.7	1285.1	1285.1	1283.7	1282.3	1280.9	1279.5	1279.3
170°	1293.0	1294.6	1296.2	1297.8	1299.5	1299.5	1297.8	1296.2	1294.6	1293.0	1293.0
172.5°	1303.4	1305.0	1306.6	1308.2	1309.8	1309.9	1308.5	1307.2	1305.8	1304.4	1304.4
175°	1310.6	1312.2	1313.8	1315.5	1317.1	1317.2	1315.8	1314.4	1313.0	1311.7	1311.7
177.5°	1314.8	1316.4	1318.0	1319.6	1321.2	1321.3	1319.9	1318.6	1317.2	1315.8	1315.8
180°	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2893.6	2893.6	2893.6	2893.6	2893.6	2893.6	2893.6	2893.6	2893.6	2893.6	2893.6
2.5°	3072.2	3069.2	3040.7	3012.3	2984.4	2956.5	2935.7	2915.0	2880.0	2845.0	2823.0
5°	3262.6	3240.0	3195.0	3149.9	3082.3	3014.6	2957.7	2900.7	2828.4	2756.0	2695.5
7.5°	3368.8	3350.4	3295.8	3241.2	3151.7	3062.1	2973.1	2884.1	2777.4	2670.6	2579.2
10°	3371.7	3387.2	3342.1	3297.0	3196.1	3095.3	2974.3	2853.3	2709.7	2566.2	2448.1
12.5°	3266.1	3332.6	3323.1	3313.6	3211.0	3108.4	2961.2	2814.1	2638.0	2461.8	2314.1
15°	3068.6	3197.3	3235.3	3273.3	3188.4	3103.6	2936.3	2769.0	2562.0	2355.0	2185.3
17.5°	2814.1	2994.5	3094.7	3195.0	3133.3	3071.6	2888.3	2705.0	2471.9	2238.7	2054.2
20°	2512.8	2748.9	2906.1	3063.3	3040.7	3018.2	2829.0	2639.7	2388.2	2136.7	1936.8
22.5°	2215.0	2464.1	2681.3	2898.4	2921.5	2944.6	2753.6	2562.6	2287.4	2012.1	1808.7
25°	1958.1	2211.4	2470.1	2728.7	2780.9	2833.1	2651.6	2470.1	2184.7	1899.4	1697.1
27.5°	1713.2	1954.0	2238.7	2523.5	2618.4	2713.3	2547.2	2381.1	2083.9	1786.7	1585.0
30°	1513.2	1728.6	2019.2	2309.9	2442.2	2574.5	2422.0	2269.6	1974.8	1679.9	1482.4
32.5°	1327.0	1519.8	1811.6	2103.5	2257.1	2410.8	2279.1	2147.4	1863.8	1580.3	1385.1
35°	1179.9	1352.5	1624.8	1897.0	2069.1	2241.1	2133.1	2025.2	1748.2	1471.1	1286.6
37.5°	1053.5	1198.3	1453.9	1709.6	1892.3	2075.0	1984.8	1894.7	1634.3	1373.8	1199.4
40°	949.1	1065.4	1303.3	1541.1	1720.3	1899.4	1822.3	1745.2	1512.1	1278.9	1115.8
42.5°	859.5	959.8	1173.3	1386.9	1551.2	1715.5	1664.5	1613.5	1402.3	1191.1	1039.9
45°	780.6	864.9	1052.9	1241.0	1392.2	1543.5	1503.2	1462.8	1280.7	1098.6	959.8
47.5°	710.7	783.0	950.9	1118.8	1254.6	1390.5	1353.1	1315.7	1165.0	1014.4	888.0
50°	646.6	708.3	848.3	988.3	1110.5	1232.7	1201.8	1171.0	1046.4	921.8	812.7
52.5°	586.1	637.1	762.9	888.6	987.1	1085.6	1061.8	1038.1	942.0	845.9	746.8
55°	528.5	575.4	681.6	787.8	872.0	956.2	932.5	908.8	834.0	759.3	672.1
57.5°	476.3	517.3	603.3	689.3	756.3	823.4	812.1	800.8	738.5	676.2	604.5
60°	421.2	457.9	532.1	606.2	660.2	714.2	701.2	688.1	643.6	599.1	537.4
62.5°	371.9	404.6	463.9	523.2	567.1	611.0	601.5	592.0	558.2	524.4	473.4
65°	320.3	352.4	400.4	448.5	482.9	517.3	509.0	500.7	475.2	449.6	408.7
67.5°	273.5	300.2	341.7	383.2	406.3	429.5	424.7	420.0	400.4	380.8	348.8
70°	226.0	249.1	283.5	318.0	334.0	350.0	351.8	353.5	335.7	318.0	294.2
72.5°	178.6	196.9	229.0	261.0	273.5	285.9	285.3	284.7	274.1	263.4	242.0
75°	137.0	150.7	175.6	200.5	211.2	221.9	224.2	226.6	216.5	206.4	194.6
77.5°	98.5	108.0	126.9	145.9	157.8	169.7	170.8	172.0	167.3	162.5	151.3
80°	69.4	72.4	84.2	96.1	108.6	121.0	122.8	124.6	119.8	115.1	108.0
82.5°	48.0	49.8	54.0	58.1	68.2	78.3	80.7	83.0	80.7	78.3	70.6
85°	29.1	29.7	31.4	33.2	38.0	42.7	45.1	47.5	46.3	45.1	40.9
87.5°	13.1	13.1	13.6	14.2	15.4	16.6	19.6	22.5	20.8	19.0	17.2
90°	18.9	15.9	12.9	10.2	7.9	5.6	3.3	1.0	3.3	5.6	7.9
92.5°	40.8	39.4	38.0	36.6	35.2	33.8	32.5	31.1	32.5	33.8	35.2
95°	73.0	71.1	69.3	67.6	66.0	64.4	62.7	61.1	62.7	64.4	66.0
97.5°	109.1	107.8	106.4	105.1	104.0	102.8	101.6	100.5	101.6	102.8	104.0
100°	150.0	148.8	147.7	146.4	145.0	143.7	142.3	140.9	142.3	143.7	145.0
102.5°	194.7	193.1	191.4	190.3	189.6	188.9	188.2	187.5	188.2	188.9	189.6
105°	240.4	238.3	236.2	235.0	234.5	234.0	233.6	233.1	233.6	234.0	234.5
107.5°	290.3	289.4	288.5	287.9	287.7	287.4	287.2	287.0	287.2	287.4	287.7
110°	339.9	339.5	339.0	338.6	338.1	337.6	337.2	336.7	337.2	337.6	338.1



TEST NUMBER: P831814

CATALOG NUMBER: S123RDIP-S1000D1195U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	389.6	389.6	389.6	389.4	389.2	389.0	388.8	388.5	388.8	389.0	389.2
115°	442.3	442.7	443.2	443.1	442.4	441.7	441.0	440.3	441.0	441.7	442.4
117.5°	493.1	493.5	494.0	494.1	493.9	493.6	493.4	493.2	493.4	493.6	493.9
120°	545.2	546.3	547.5	547.4	546.0	544.6	543.2	541.9	543.2	544.6	546.0
122.5°	595.6	596.1	596.5	596.3	595.4	594.5	593.5	592.6	593.5	594.5	595.4
125°	646.4	646.8	647.3	647.2	646.5	645.8	645.1	644.4	645.1	645.8	646.5
127.5°	697.2	697.6	698.1	697.6	696.2	694.9	693.5	692.1	693.5	694.9	696.2
130°	746.3	747.0	747.7	747.1	745.3	743.4	741.6	739.7	741.6	743.4	745.3
132.5°	794.5	795.0	795.5	794.8	792.9	791.1	789.2	787.4	789.2	791.1	792.9
135°	841.7	842.0	842.2	841.6	840.2	838.9	837.5	836.1	837.5	838.9	840.2
137.5°	887.6	886.9	886.2	885.3	884.1	883.0	881.8	880.7	881.8	883.0	884.1
140°	933.0	932.8	932.6	931.9	930.7	929.6	928.4	927.3	928.4	929.6	930.7
142.5°	976.1	975.6	975.2	974.4	973.2	972.1	970.9	969.8	970.9	972.1	973.2
145°	1018.1	1017.4	1016.7	1016.1	1015.7	1015.2	1014.8	1014.3	1014.8	1015.2	1015.7
147.5°	1058.5	1057.8	1057.1	1056.3	1055.4	1054.5	1053.6	1052.6	1053.6	1054.5	1055.4
150°	1096.3	1095.8	1095.3	1094.9	1094.4	1094.0	1093.5	1093.0	1093.5	1094.0	1094.4
152.5°	1129.9	1129.7	1129.4	1129.0	1128.3	1127.6	1126.9	1126.2	1126.9	1127.6	1128.3
155°	1162.0	1161.8	1161.5	1161.4	1161.4	1161.4	1161.4	1161.4	1161.4	1161.4	1161.4
157.5°	1191.0	1190.8	1190.6	1190.6	1190.8	1191.0	1191.2	1191.5	1191.2	1191.0	1190.8
160°	1217.4	1217.4	1217.4	1217.6	1218.1	1218.5	1219.0	1219.4	1219.0	1218.5	1218.1
162.5°	1241.8	1241.5	1241.3	1241.5	1242.2	1242.9	1243.6	1244.3	1243.6	1242.9	1242.2
165°	1261.9	1261.9	1261.9	1262.3	1263.0	1263.7	1264.3	1265.0	1264.3	1263.7	1263.0
167.5°	1279.1	1278.8	1278.6	1279.0	1279.9	1280.8	1281.7	1282.6	1281.7	1280.8	1279.9
170°	1293.0	1293.0	1293.0	1293.5	1294.4	1295.3	1296.2	1297.1	1296.2	1295.3	1294.4
172.5°	1304.4	1304.4	1304.4	1304.9	1305.8	1306.7	1307.6	1308.5	1307.6	1306.7	1305.8
175°	1311.7	1311.7	1311.7	1312.1	1313.0	1314.0	1314.9	1315.8	1314.9	1314.0	1313.0
177.5°	1315.8	1315.8	1315.8	1316.3	1317.2	1318.1	1319.0	1319.9	1319.0	1318.1	1317.2
180°	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9



TEST NUMBER: P831814

CATALOG NUMBER: S123RDIP-S1000D1195U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2893.6	2893.6	2893.6	2893.6	2893.6	2893.6	2893.6	2893.6	2893.6	2893.6	2893.6
2.5°	2801.1	2767.3	2733.5	2709.1	2684.8	2654.6	2624.3	2623.1	2621.9	2599.4	2576.9
5°	2635.0	2576.3	2517.5	2460.0	2402.5	2344.9	2287.4	2274.3	2261.3	2241.7	2222.1
7.5°	2487.9	2394.1	2300.4	2226.9	2153.3	2095.8	2038.2	1999.1	1959.9	1929.7	1899.4
10°	2330.1	2213.8	2097.5	2008.6	1919.6	1857.3	1795.0	1749.9	1704.9	1683.5	1662.1
12.5°	2166.4	2040.0	1913.7	1826.5	1739.3	1664.5	1589.8	1548.8	1507.9	1478.2	1448.6
15°	2015.7	1879.8	1744.0	1651.5	1558.9	1488.9	1418.9	1378.0	1337.1	1307.4	1277.7
17.5°	1869.8	1732.7	1595.7	1502.0	1408.3	1344.8	1281.3	1241.6	1201.8	1183.4	1165.0
20°	1736.9	1598.7	1460.5	1372.1	1283.7	1221.4	1159.1	1137.8	1116.4	1099.2	1082.0
22.5°	1605.2	1472.3	1339.4	1254.6	1169.8	1124.7	1079.6	1062.4	1045.2	1032.2	1019.1
25°	1494.9	1362.6	1230.3	1156.1	1082.0	1047.0	1012.0	1000.7	989.5	976.4	963.4
27.5°	1383.3	1257.6	1131.8	1072.5	1013.2	984.7	956.2	942.0	927.8	917.1	906.4
30°	1284.9	1168.6	1052.3	1003.1	953.9	928.9	904.0	888.6	873.2	863.1	853.0
32.5°	1190.0	1086.7	983.5	941.4	899.3	875.0	850.6	835.8	821.0	809.1	797.3
35°	1102.2	1012.6	923.0	884.5	845.9	821.6	797.3	782.4	767.6	755.7	743.9
37.5°	1025.0	943.8	862.5	826.3	790.1	768.8	747.4	732.0	716.6	704.1	691.7
40°	952.7	880.9	809.1	774.1	739.1	716.0	692.9	679.2	665.6	654.3	643.0
42.5°	888.6	822.8	756.9	722.5	688.1	666.2	644.2	628.2	612.2	605.7	599.1
45°	821.0	762.9	704.7	671.5	638.3	615.1	592.0	578.4	564.7	558.8	552.9
47.5°	761.7	707.7	653.7	621.1	588.5	567.7	546.9	536.3	525.6	517.3	509.0
50°	703.5	651.3	599.1	567.7	536.3	518.5	500.7	487.6	474.6	468.6	462.7
52.5°	647.8	600.3	552.9	520.8	488.8	471.6	454.4	443.1	431.8	419.4	406.9
55°	584.9	543.4	501.8	473.4	444.9	427.1	409.3	396.3	383.2	370.2	357.1
57.5°	532.7	491.8	450.8	425.3	399.8	382.6	365.4	351.2	336.9	326.3	315.6
60°	475.7	440.2	404.6	379.6	354.7	338.1	321.5	307.9	294.2	288.9	283.5
62.5°	422.4	389.1	355.9	334.0	312.0	296.0	280.0	271.1	262.2	258.6	255.1
65°	367.8	339.3	310.8	290.7	270.5	256.9	243.2	239.1	234.9	231.9	229.0
67.5°	316.8	292.4	268.1	250.3	232.5	223.0	213.6	208.8	204.1	200.5	196.9
70°	270.5	249.1	227.8	212.4	196.9	188.0	179.1	175.0	170.8	164.3	157.8
72.5°	220.7	204.1	187.5	175.6	163.7	156.0	148.3	140.0	131.7	125.8	119.8
75°	182.7	166.1	149.5	138.2	126.9	118.0	109.1	106.2	103.2	101.4	99.7
77.5°	140.0	125.8	111.5	102.6	93.7	89.6	85.4	83.6	81.9	81.3	80.7
80°	100.8	89.0	77.1	72.4	67.6	66.4	65.3	64.1	62.9	62.3	61.7
82.5°	62.9	56.9	51.0	49.8	48.6	48.0	47.5	46.9	46.3	45.7	45.1
85°	36.8	34.4	32.0	31.4	30.8	30.3	29.7	29.7	29.7	29.7	29.7
87.5°	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4	14.8	14.2
90°	10.2	12.9	15.9	18.9	21.9	24.9	25.8	26.7	27.6	28.5	29.2
92.5°	36.6	38.0	39.4	40.8	42.1	43.5	44.2	44.9	45.6	46.3	46.4
95°	67.6	69.3	71.1	73.0	74.8	76.7	77.6	78.5	79.4	80.4	80.8
97.5°	105.1	106.4	107.8	109.1	110.5	111.9	113.0	114.2	115.3	116.5	117.0
100°	146.4	147.7	148.8	150.0	151.1	152.3	153.0	153.7	154.4	155.1	155.6
102.5°	190.3	191.4	193.1	194.7	196.3	197.9	198.6	199.3	200.0	200.7	200.9
105°	235.0	236.2	238.3	240.4	242.4	244.5	244.5	244.5	244.5	244.5	244.7
107.5°	287.9	288.5	289.4	290.3	291.2	292.2	292.9	293.6	294.2	294.9	295.2
110°	338.6	339.0	339.5	339.9	340.4	340.9	341.8	342.7	343.6	344.5	344.8



TEST NUMBER: P831814

CATALOG NUMBER: S123RDIP-S1000D1195U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	389.4	389.6	389.6	389.6	389.6	389.6	390.7	391.9	393.0	394.2	394.7
115°	443.1	443.2	442.7	442.3	441.8	441.4	441.6	441.8	442.1	442.3	442.3
117.5°	494.1	494.0	493.5	493.1	492.6	492.1	492.1	492.1	492.1	492.1	491.8
120°	547.4	547.5	546.3	545.2	544.0	542.9	542.7	542.4	542.2	542.0	541.6
122.5°	596.3	596.5	596.1	595.6	595.2	594.7	594.0	593.3	592.6	591.9	591.2
125°	647.2	647.3	646.8	646.4	645.9	645.5	644.5	643.6	642.7	641.8	640.9
127.5°	697.6	698.1	697.6	697.2	696.7	696.2	694.9	693.5	692.1	690.7	689.6
130°	747.1	747.7	747.0	746.3	745.6	744.9	744.0	743.1	742.2	741.2	740.0
132.5°	794.8	795.5	795.0	794.5	794.1	793.6	792.5	791.3	790.2	789.0	787.9
135°	841.6	842.2	842.0	841.7	841.5	841.3	840.4	839.4	838.5	837.6	836.9
137.5°	885.3	886.2	886.9	887.6	888.3	888.9	887.8	886.6	885.5	884.3	883.4
140°	931.9	932.6	932.8	933.0	933.3	933.5	933.3	933.0	932.8	932.6	931.6
142.5°	974.4	975.2	975.6	976.1	976.5	977.0	976.8	976.5	976.3	976.1	975.4
145°	1016.1	1016.7	1017.4	1018.1	1018.8	1019.5	1019.3	1019.0	1018.8	1018.6	1018.0
147.5°	1056.3	1057.1	1057.8	1058.5	1059.2	1059.9	1059.9	1059.9	1059.9	1059.9	1059.2
150°	1094.9	1095.3	1095.8	1096.3	1096.7	1097.2	1097.2	1097.2	1097.2	1097.2	1096.5
152.5°	1129.0	1129.4	1129.7	1129.9	1130.1	1130.3	1130.8	1131.3	1131.7	1132.2	1131.8
155°	1161.4	1161.5	1161.8	1162.0	1162.2	1162.5	1163.4	1164.3	1165.2	1166.1	1165.8
157.5°	1190.6	1190.6	1190.8	1191.0	1191.2	1191.5	1192.4	1193.3	1194.2	1195.2	1194.9
160°	1217.6	1217.4	1217.4	1217.4	1217.4	1217.4	1218.5	1219.7	1220.8	1222.0	1222.1
162.5°	1241.5	1241.3	1241.5	1241.8	1242.0	1242.2	1243.4	1244.5	1245.7	1246.8	1246.6
165°	1262.3	1261.9	1261.9	1261.9	1261.9	1261.9	1263.3	1264.7	1266.1	1267.4	1267.3
167.5°	1279.0	1278.6	1278.8	1279.1	1279.3	1279.5	1280.9	1282.3	1283.7	1285.1	1285.1
170°	1293.5	1293.0	1293.0	1293.0	1293.0	1293.0	1294.6	1296.2	1297.8	1299.5	1299.5
172.5°	1304.9	1304.4	1304.4	1304.4	1304.4	1304.4	1305.8	1307.2	1308.5	1309.9	1309.8
175°	1312.1	1311.7	1311.7	1311.7	1311.7	1311.7	1313.0	1314.4	1315.8	1317.2	1317.1
177.5°	1316.3	1315.8	1315.8	1315.8	1315.8	1315.8	1317.2	1318.6	1319.9	1321.3	1321.2
180°	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9



TEST NUMBER: P831814

CATALOG NUMBER: S123RDIP-S1000D1195U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2893.6	2893.6	2893.6	2893.6
2.5°	2570.9	2565.0	2562.6	2560.2
5°	2203.7	2185.3	2181.2	2177.0
7.5°	1891.7	1884.0	1858.5	1833.0
10°	1638.4	1614.7	1604.0	1593.3
12.5°	1426.6	1404.7	1401.1	1397.6
15°	1262.3	1246.9	1241.6	1236.2
17.5°	1154.4	1143.7	1137.2	1130.6
20°	1074.3	1066.6	1061.8	1057.1
22.5°	1013.2	1007.2	1003.7	1000.1
25°	954.5	945.6	942.6	939.6
27.5°	898.7	891.0	888.0	885.1
30°	846.5	840.0	835.8	831.7
32.5°	789.5	781.8	779.5	777.1
35°	739.1	734.4	732.0	729.6
37.5°	685.7	679.8	676.2	672.7
40°	640.1	637.1	635.3	633.5
42.5°	593.8	588.5	587.9	587.3
45°	547.5	542.2	541.0	539.8
47.5°	504.2	499.5	498.9	498.3
50°	456.2	449.6	444.9	440.2
52.5°	401.0	395.1	390.9	386.8
55°	350.6	344.1	340.5	336.9
57.5°	312.6	309.6	307.9	306.1
60°	281.8	280.0	278.8	277.6
62.5°	253.3	251.5	251.5	251.5
65°	227.2	225.4	223.6	221.9
67.5°	193.4	189.8	189.2	188.6
70°	152.5	147.1	146.5	145.9
72.5°	119.2	118.6	117.5	116.3
75°	98.5	97.3	97.3	97.3
77.5°	79.5	78.3	78.3	78.3
80°	61.1	60.5	61.1	61.7
82.5°	45.1	45.1	44.5	43.9
85°	29.1	28.5	28.5	28.5
87.5°	14.2	14.2	14.2	14.2
90°	29.7	30.2	30.6	31.1
92.5°	45.9	45.5	45.0	44.6
95°	80.8	80.8	80.8	80.8
97.5°	116.7	116.5	116.3	116.0
100°	156.1	156.6	157.0	157.5
102.5°	200.7	200.4	200.2	200.0
105°	245.2	245.7	246.1	246.6
107.5°	294.9	294.7	294.5	294.2
110°	344.3	343.9	343.4	342.9



TEST NUMBER: P831814

CATALOG NUMBER: S123RDIP-S1000D1195U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	394.7	394.7	394.7	394.7
115°	442.1	441.8	441.6	441.4
117.5°	491.1	490.4	489.7	489.0
120°	541.2	540.7	540.2	539.8
122.5°	590.6	589.9	589.2	588.5
125°	639.9	639.0	638.1	637.2
127.5°	688.6	687.7	686.8	685.9
130°	738.4	736.8	735.1	733.5
132.5°	786.7	785.6	784.4	783.3
135°	836.4	836.0	835.5	835.1
137.5°	882.7	882.0	881.3	880.7
140°	930.0	928.4	926.8	925.2
142.5°	974.2	973.1	971.9	970.8
145°	1017.1	1016.1	1015.2	1014.3
147.5°	1057.8	1056.4	1055.1	1053.7
150°	1095.1	1093.7	1092.4	1091.0
152.5°	1130.7	1129.5	1128.4	1127.2
155°	1164.2	1162.6	1161.0	1159.4
157.5°	1193.5	1192.2	1190.8	1189.4
160°	1221.2	1220.3	1219.3	1218.4
162.5°	1245.0	1243.4	1241.8	1240.2
165°	1265.7	1264.1	1262.5	1260.9
167.5°	1283.7	1282.3	1280.9	1279.5
170°	1297.8	1296.2	1294.6	1293.0
172.5°	1308.2	1306.6	1305.0	1303.4
175°	1315.5	1313.8	1312.2	1310.6
177.5°	1319.6	1318.0	1316.4	1314.8
180°	1318.9	1318.9	1318.9	1318.9



TEST NUMBER: P831814

CATALOG NUMBER: S123RDIP-S1000D1195U940-4F0-1E-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	12.81	13.63	13.77	14.59	15.85	17.47	18.29	18.43	19.25	20.51
	3H	14.03	14.76	15.00	15.73	17.01	18.97	19.70	19.94	20.68	21.96
	4H	14.41	15.10	15.39	16.08	17.37	19.46	20.15	20.44	21.13	22.42
	6H	14.69	15.32	15.68	16.31	17.61	19.77	20.41	20.76	21.39	22.69
	8H	14.78	15.38	15.78	16.38	17.68	19.85	20.45	20.85	21.45	22.75
	12H	14.83	15.40	15.83	16.39	17.72	19.88	20.45	20.89	21.45	22.77
4H	2H	13.53	14.22	14.52	15.20	16.49	17.47	18.16	18.46	19.13	20.42
	3H	14.90	15.47	15.90	16.48	17.78	19.12	19.70	20.12	20.70	22.01
	4H	15.35	15.88	16.36	16.88	18.20	19.73	20.25	20.73	21.25	22.58
	6H	15.72	16.17	16.74	17.19	18.52	20.17	20.62	21.18	21.64	22.96
	8H	15.84	16.26	16.86	17.28	18.62	20.30	20.72	21.31	21.73	23.07
	12H	15.92	16.30	16.95	17.33	18.67	20.36	20.74	21.39	21.77	23.11
8H	4H	15.67	16.09	16.68	17.10	18.44	19.70	20.11	20.71	21.13	22.47
	6H	16.13	16.47	17.17	17.53	18.87	20.19	20.54	21.23	21.60	22.93
	8H	16.32	16.63	17.37	17.67	19.03	20.38	20.68	21.43	21.73	23.08
	12H	16.46	16.73	17.51	17.77	19.17	20.49	20.76	21.54	21.80	23.20
12H	4H	15.68	16.05	16.71	17.09	18.43	19.65	20.02	20.68	21.06	22.40
	6H	16.19	16.49	17.24	17.54	18.89	20.17	20.47	21.22	21.51	22.87
	8H	16.41	16.67	17.46	17.71	19.11	20.36	20.63	21.41	21.66	23.06