

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: P831799

Luminaire Tested: S123RDIP-S1000D1195U840-4F0-1E-UDD-G1

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831799
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-S1000D1195U840-4F0-1E-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

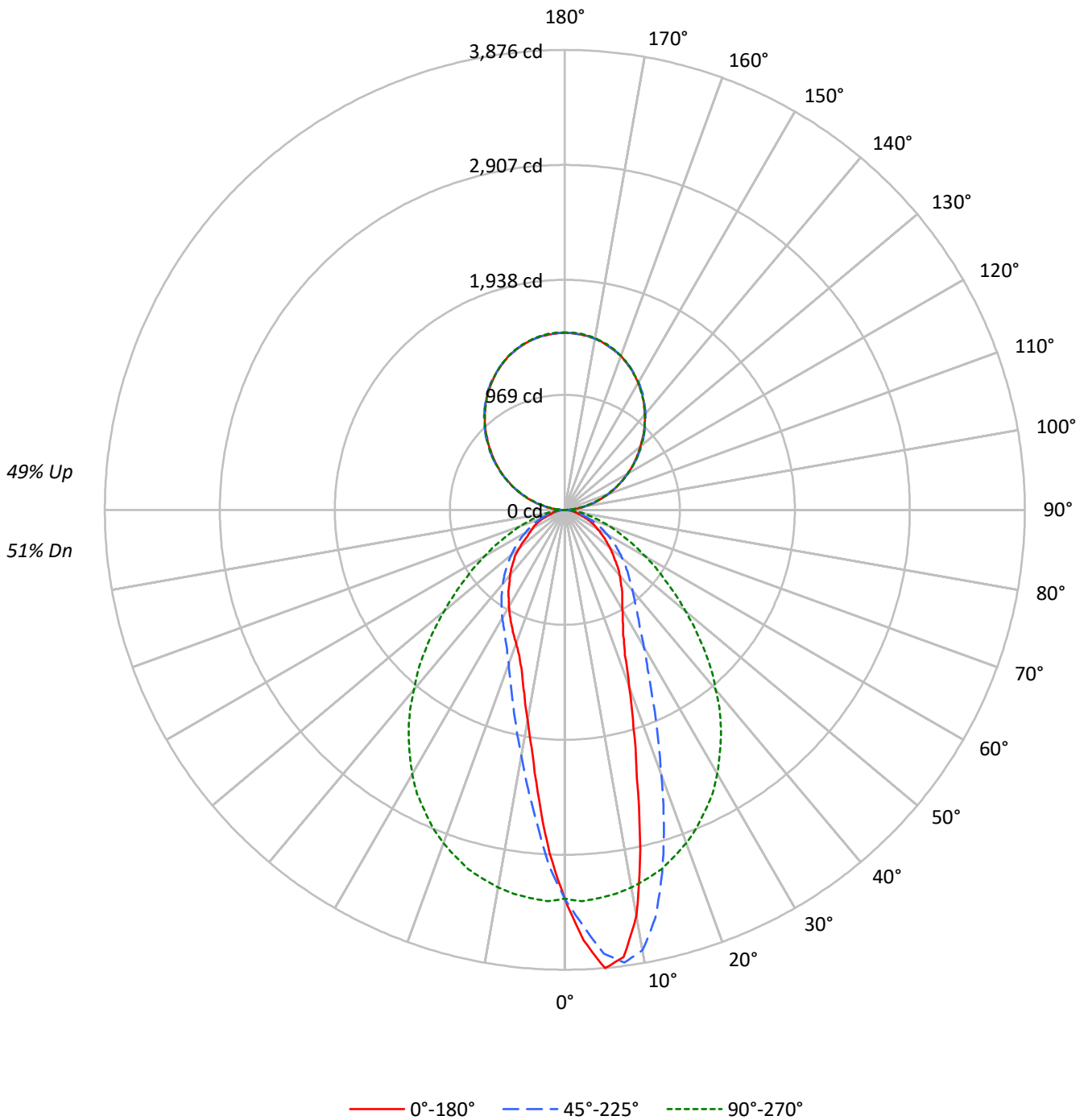
Lumens per Lamp: N/A
Luminaire Lumens: 8486.6 lumens
Efficiency: N/A
Efficacy: 128.4 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: General Diffuse

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	35273	35273	35273	35273	35273
5°	41884	40548	35496	28694	26640
10°	37948	41185	35319	22990	19723
15°	26127	35313	34946	18790	15601
20°	18176	27188	34244	15844	13712
25°	13851	20721	33224	14082	12638
30°	12057	16566	31947	13075	11707
35°	11069	13975	30137	12226	10858
40°	10100	12479	27771	11394	10082
45°	9121	11412	25219	10605	9305
50°	8279	10530	22206	9833	8348
55°	7488	9670	19314	9077	7161
60°	6710	8794	16777	8243	6768
65°	6194	7801	14441	7409	6401
70°	5032	6744	12601	6703	5202
75°	4413	5365	10672	5560	4583
80°	3998	4537	8746	4661	4333
85°	3656	3977	6632	4236	3977

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 26609 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	298.7	3.5
10°-20°	691.2	8.1
20°-30°	793.0	9.3
30°-40°	781.7	9.2
40°-50°	689.3	8.1
50°-60°	530.3	6.2
60°-70°	348.6	4.1
70°-80°	169.3	2.0
80°-90°	45.9	0.5
90°-100°	96.1	1.1
100°-110°	291.0	3.4
110°-120°	495.4	5.8
120°-130°	651.8	7.7
130°-140°	732.6	8.6
140°-150°	720.2	8.5
150°-160°	606.4	7.1
160°-170°	403.7	4.8
170°-180°	141.4	1.7
0°-30°	1782.9	21.0
0°-40°	2564.6	30.2
0°-60°	3784.2	44.6
0°-90°	4348.0	51.2
90°-120°	882.6	10.4
90°-150°	2987.2	35.2
90°-180°	4139.0	48.8
0°-180°	8486.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3277	3277	3277	3277	3277	
5°	3876	3753	3285	2656	2466	354
15°	2345	3169	3136	1686	1400	662
25°	1166	1745	2797	1186	1064	551
35°	842	1064	2294	930	826	525
45°	599	750	1657	697	611	465
55°	399	515	1029	484	382	358
65°	243	306	567	291	251	238
75°	106	129	257	134	110	114
85°	30	32	54	34	32	31
90°	35	28	1	28	35	18
95°	92	87	69	87	92	92
105°	279	277	264	277	279	296
115°	500	500	499	500	500	495
125°	722	731	730	731	722	645
135°	946	953	947	953	946	727
145°	1149	1155	1149	1155	1149	717
155°	1313	1316	1315	1316	1313	605
165°	1428	1429	1433	1429	1428	403
175°	1484	1486	1490	1486	1484	141
180°	1494	1494	1494	1494	1494	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3277.0	3277.0	3277.0	3277.0	3277.0	3277.0	3277.0	3277.0	3277.0	3277.0	3277.0
2.5°	3631.7	3620.3	3608.9	3605.5	3602.2	3591.4	3580.7	3556.5	3532.3	3507.5	3482.6
5°	3876.3	3877.6	3879.0	3875.6	3872.2	3858.1	3844.0	3814.5	3784.9	3752.7	3720.4
7.5°	3801.0	3822.5	3844.0	3848.1	3852.1	3862.8	3873.6	3866.9	3860.2	3848.1	3836.0
10°	3471.9	3470.5	3469.2	3493.4	3517.5	3589.4	3661.3	3698.3	3735.2	3768.1	3801.0
12.5°	2934.4	2936.4	2938.4	3017.7	3097.0	3164.8	3232.7	3326.7	3420.8	3522.2	3623.7
15°	2344.6	2377.5	2410.4	2481.0	2551.5	2653.6	2755.7	2882.0	3008.3	3168.9	3329.4
17.5°	1925.4	1939.5	1953.6	2021.4	2089.3	2186.0	2282.8	2425.9	2569.0	2775.9	2982.8
20°	1586.8	1599.6	1612.3	1661.4	1710.4	1803.1	1895.8	2032.2	2168.6	2373.5	2578.4
22.5°	1324.8	1349.6	1374.5	1407.4	1440.3	1507.5	1574.7	1713.8	1852.8	2039.6	2226.3
25°	1166.2	1177.7	1189.1	1217.3	1245.5	1310.0	1374.5	1466.5	1558.6	1744.7	1930.7
27.5°	1058.8	1062.1	1065.5	1086.3	1107.1	1148.8	1190.4	1275.7	1361.1	1514.2	1667.4
30°	970.1	976.1	982.2	998.3	1014.4	1044.6	1074.9	1135.3	1195.8	1332.8	1469.9
32.5°	901.6	904.9	908.3	921.7	935.1	957.3	979.5	1027.2	1074.9	1179.7	1284.5
35°	842.4	843.1	843.8	853.9	863.9	885.4	906.9	946.6	986.2	1063.5	1140.7
37.5°	775.3	780.0	784.7	792.1	799.4	818.3	837.1	869.3	901.6	965.4	1029.2
40°	718.8	722.9	726.9	735.6	744.4	759.1	773.9	803.5	833.0	888.1	943.2
42.5°	662.4	665.1	667.8	676.5	685.2	703.4	721.5	745.0	768.5	814.2	859.9
45°	599.2	606.0	612.7	622.1	631.5	646.9	662.4	686.6	710.8	749.7	788.7
47.5°	546.8	550.2	553.6	561.6	569.7	588.5	607.3	628.8	650.3	686.6	722.9
50°	494.4	495.8	497.1	504.5	511.9	528.7	545.5	570.4	595.2	628.8	662.4
52.5°	444.7	448.1	451.4	458.8	466.2	477.6	489.1	514.6	540.1	573.0	606.0
55°	399.0	401.1	403.1	408.5	413.8	427.3	440.7	462.9	485.0	515.3	545.5
57.5°	356.1	358.7	361.4	365.5	369.5	381.6	393.7	413.2	432.6	462.9	493.1
60°	311.7	315.1	318.4	323.1	327.8	337.2	346.6	364.1	381.6	408.5	435.3
62.5°	279.5	280.1	280.8	284.8	288.9	295.6	302.3	316.4	330.5	357.4	384.3
65°	243.2	245.2	247.2	249.2	251.3	256.6	262.0	274.1	286.2	306.3	326.5
67.5°	205.6	207.6	209.6	213.0	216.3	221.0	225.7	233.8	241.8	260.7	279.5
70°	159.9	159.9	159.9	165.3	170.6	178.7	186.8	192.8	198.9	214.3	229.8
72.5°	130.3	131.0	131.7	132.3	133.0	137.7	142.4	152.5	162.6	172.0	181.4
75°	106.1	106.8	107.5	108.2	108.8	110.2	111.5	114.9	118.2	129.0	139.7
77.5°	84.6	85.3	86.0	86.7	87.3	88.7	90.0	91.4	92.7	96.7	100.8
80°	64.5	65.2	65.8	66.5	67.2	67.9	68.5	69.9	71.2	73.2	75.2
82.5°	47.0	47.0	47.0	47.0	47.0	48.4	49.7	49.7	49.7	51.1	52.4
85°	29.6	29.6	29.6	30.2	30.9	30.9	30.9	31.6	32.2	32.2	32.2
87.5°	13.4	12.8	12.1	12.8	13.4	13.4	13.4	14.1	14.8	14.8	14.8
90°	35.2	34.7	34.2	33.6	33.1	32.3	31.3	30.2	29.2	28.2	24.8
92.5°	50.5	51.0	51.5	52.0	52.5	52.4	51.6	50.8	50.1	49.3	47.7
95°	91.5	91.5	91.5	91.5	91.5	91.0	90.0	88.9	87.9	86.8	84.7
97.5°	131.4	131.7	131.9	132.2	132.5	131.9	130.6	129.3	128.0	126.7	125.2
100°	178.3	177.8	177.3	176.8	176.3	175.6	174.8	174.0	173.3	172.5	171.2
102.5°	226.5	226.7	227.0	227.2	227.5	227.2	226.5	225.7	224.9	224.1	222.3
105°	279.3	278.7	278.2	277.7	277.2	276.9	276.9	276.9	276.9	276.9	274.6
107.5°	333.2	333.5	333.8	334.0	334.3	334.0	333.2	332.4	331.7	330.9	329.8
110°	388.4	388.9	389.4	389.9	390.5	390.2	389.2	388.1	387.1	386.0	385.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	447.0	447.0	447.0	447.0	447.0	446.4	445.1	443.8	442.5	441.2	441.2
115°	499.8	500.1	500.4	500.6	500.9	500.9	500.6	500.4	500.1	499.8	500.4
117.5°	553.8	554.6	555.4	556.2	556.9	557.3	557.3	557.3	557.3	557.3	557.9
120°	611.3	611.8	612.4	612.9	613.4	613.8	614.1	614.3	614.6	614.8	616.1
122.5°	666.5	667.2	668.0	668.8	669.6	670.4	671.2	671.9	672.7	673.5	674.0
125°	721.6	722.6	723.7	724.7	725.8	726.8	727.9	728.9	730.0	731.0	731.5
127.5°	776.8	777.8	778.8	779.9	780.9	782.2	783.8	785.4	786.9	788.5	789.0
130°	830.7	832.6	834.4	836.2	838.0	839.5	840.5	841.5	842.6	843.6	844.4
132.5°	887.0	888.4	889.7	891.0	892.3	893.6	894.9	896.2	897.5	898.8	899.3
135°	945.7	946.2	946.8	947.3	947.8	948.6	949.6	950.7	951.7	952.8	953.0
137.5°	997.3	998.1	998.9	999.7	1000.5	1001.5	1002.8	1004.1	1005.4	1006.7	1005.9
140°	1047.8	1049.6	1051.4	1053.3	1055.1	1056.1	1056.4	1056.7	1056.9	1057.2	1056.9
142.5°	1099.4	1100.7	1102.0	1103.3	1104.6	1105.4	1105.7	1105.9	1106.2	1106.5	1105.9
145°	1148.7	1149.7	1150.8	1151.8	1152.9	1153.5	1153.8	1154.0	1154.3	1154.6	1153.8
147.5°	1193.3	1194.9	1196.4	1198.0	1199.5	1200.3	1200.3	1200.3	1200.3	1200.3	1199.5
150°	1235.5	1237.1	1238.7	1240.2	1241.8	1242.6	1242.6	1242.6	1242.6	1242.6	1242.0
152.5°	1276.6	1277.9	1279.2	1280.5	1281.8	1282.2	1281.7	1281.2	1280.6	1280.1	1279.9
155°	1313.0	1314.8	1316.6	1318.4	1320.3	1320.7	1319.6	1318.6	1317.5	1316.5	1316.2
157.5°	1347.0	1348.6	1350.1	1351.7	1353.3	1353.5	1352.5	1351.4	1350.4	1349.3	1349.1
160°	1379.9	1380.9	1381.9	1383.0	1384.0	1383.9	1382.6	1381.3	1380.0	1378.7	1378.7
162.5°	1404.5	1406.3	1408.1	1410.0	1411.8	1412.1	1410.8	1409.4	1408.1	1406.8	1406.6
165°	1428.0	1429.8	1431.6	1433.4	1435.3	1435.4	1433.8	1432.3	1430.7	1429.1	1429.1
167.5°	1449.1	1450.6	1452.2	1453.8	1455.3	1455.3	1453.8	1452.2	1450.6	1449.1	1448.8
170°	1464.3	1466.2	1468.0	1469.8	1471.6	1471.6	1469.8	1468.0	1466.2	1464.3	1464.3
172.5°	1476.1	1477.9	1479.7	1481.5	1483.4	1483.5	1481.9	1480.4	1478.8	1477.2	1477.2
175°	1484.3	1486.1	1487.9	1489.8	1491.6	1491.7	1490.1	1488.6	1487.0	1485.5	1485.5
177.5°	1489.0	1490.8	1492.6	1494.4	1496.3	1496.4	1494.8	1493.3	1491.7	1490.1	1490.1
180°	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	3277.0	3277.0	3277.0	3277.0	3277.0	3277.0	3277.0	3277.0	3277.0	3277.0	3277.0
2.5°	3479.2	3475.9	3443.6	3411.4	3379.8	3348.2	3324.7	3301.2	3261.6	3221.9	3197.1
5°	3694.9	3669.4	3618.3	3567.3	3490.7	3414.1	3349.6	3285.1	3203.1	3121.2	3052.7
7.5°	3815.1	3794.3	3732.5	3670.7	3569.3	3467.8	3367.1	3266.3	3145.4	3024.4	2921.0
10°	3818.5	3836.0	3784.9	3733.9	3619.7	3505.4	3368.4	3231.4	3068.8	2906.2	2772.5
12.5°	3698.9	3774.2	3763.4	3752.7	3636.4	3520.2	3353.6	3187.0	2987.5	2788.0	2620.7
15°	3475.2	3621.0	3664.0	3707.0	3610.9	3514.9	3325.4	3136.0	2901.5	2667.0	2474.9
17.5°	3187.0	3391.2	3504.8	3618.3	3548.4	3478.6	3271.0	3063.4	2799.4	2535.4	2326.4
20°	2845.7	3113.1	3291.1	3469.2	3443.6	3418.1	3203.8	2989.5	2704.7	2419.8	2193.4
22.5°	2508.5	2790.7	3036.5	3282.4	3308.6	3334.8	3118.5	2902.2	2590.5	2278.7	2048.3
25°	2217.6	2504.5	2797.4	3090.3	3149.4	3208.5	3002.9	2797.4	2474.2	2151.1	1922.0
27.5°	1940.2	2212.9	2535.4	2857.8	2965.3	3072.8	2884.7	2696.6	2360.0	2023.5	1795.0
30°	1713.8	1957.6	2286.8	2616.0	2765.8	2915.6	2743.0	2570.3	2236.4	1902.5	1678.8
32.5°	1502.8	1721.1	2051.7	2382.2	2556.2	2730.2	2581.1	2431.9	2110.8	1789.7	1568.7
35°	1336.2	1531.7	1840.1	2148.4	2343.2	2538.1	2415.8	2293.5	1979.8	1666.1	1457.1
37.5°	1193.1	1357.0	1646.6	1936.1	2143.0	2350.0	2247.8	2145.7	1850.8	1555.9	1358.4
40°	1074.9	1206.6	1475.9	1745.3	1948.2	2151.1	2063.8	1976.4	1712.4	1448.4	1263.7
42.5°	973.4	1087.0	1328.8	1570.7	1756.8	1942.8	1885.1	1827.3	1588.1	1349.0	1177.7
45°	884.1	979.5	1192.4	1405.4	1576.7	1748.0	1702.3	1656.7	1450.4	1244.2	1087.0
47.5°	804.8	886.8	1076.9	1267.0	1420.9	1574.7	1532.4	1490.0	1319.4	1148.8	1005.7
50°	732.3	802.1	960.7	1119.2	1257.6	1396.0	1361.1	1326.1	1185.1	1044.0	920.4
52.5°	663.7	721.5	863.9	1006.4	1117.9	1229.4	1202.5	1175.6	1066.8	958.0	845.8
55°	598.6	651.6	771.9	892.1	987.5	1082.9	1056.1	1029.2	944.5	859.9	761.1
57.5°	539.5	585.8	683.2	780.6	856.5	932.5	919.7	906.9	836.4	765.9	684.6
60°	477.0	518.6	602.6	686.6	747.7	808.8	794.1	779.3	728.9	678.5	608.6
62.5°	421.2	458.2	525.3	592.5	642.2	692.0	681.2	670.5	632.2	593.9	536.1
65°	362.8	399.0	453.5	507.9	546.8	585.8	576.4	567.0	538.1	509.2	462.9
67.5°	309.7	339.9	387.0	434.0	460.2	486.4	481.0	475.6	453.5	431.3	395.0
70°	256.0	282.2	321.1	360.1	378.2	396.4	398.4	400.4	380.2	360.1	333.2
72.5°	202.2	223.0	259.3	295.6	309.7	323.8	323.1	322.5	310.4	298.3	274.1
75°	155.2	170.6	198.9	227.1	239.2	251.3	253.9	256.6	245.2	233.8	220.4
77.5°	111.5	122.3	143.8	165.3	178.7	192.1	193.5	194.8	189.4	184.1	171.3
80°	78.6	82.0	95.4	108.8	122.9	137.0	139.1	141.1	135.7	130.3	122.3
82.5°	54.4	56.4	61.1	65.8	77.3	88.7	91.4	94.1	91.4	88.7	79.9
85°	32.9	33.6	35.6	37.6	43.0	48.4	51.1	53.7	52.4	51.1	46.4
87.5°	14.8	14.8	15.5	16.1	17.5	18.8	22.2	25.5	23.5	21.5	19.5
90°	21.4	18.0	14.6	11.6	9.0	6.4	3.8	1.2	3.8	6.4	9.0
92.5°	46.2	44.6	43.0	41.5	39.9	38.3	36.8	35.2	36.8	38.3	39.9
95°	82.7	80.6	78.5	76.5	74.7	72.9	71.1	69.2	71.1	72.9	74.7
97.5°	123.6	122.0	120.5	119.0	117.7	116.4	115.1	113.8	115.1	116.4	117.7
100°	169.9	168.6	167.3	165.8	164.3	162.7	161.1	159.6	161.1	162.7	164.3
102.5°	220.5	218.6	216.8	215.5	214.7	213.9	213.2	212.4	213.2	213.9	214.7
105°	272.2	269.9	267.5	266.1	265.6	265.0	264.5	264.0	264.5	265.0	265.6
107.5°	328.8	327.8	326.7	326.1	325.8	325.5	325.3	325.0	325.3	325.5	325.8
110°	385.0	384.5	383.9	383.4	382.9	382.4	381.9	381.3	381.9	382.4	382.9



TEST NUMBER: P831799

CATALOG NUMBER: S123RDIP-S1000D1195U840-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	441.2	441.2	441.2	441.0	440.8	440.5	440.3	440.0	440.3	440.5	440.8
115°	500.9	501.4	501.9	501.8	501.0	500.2	499.5	498.7	499.5	500.2	501.0
117.5°	558.4	558.9	559.4	559.6	559.3	559.0	558.8	558.5	558.8	559.0	559.3
120°	617.4	618.7	620.0	619.9	618.4	616.8	615.2	613.7	615.2	616.8	618.4
122.5°	674.5	675.1	675.6	675.3	674.3	673.2	672.2	671.2	672.2	673.2	674.3
125°	732.0	732.6	733.1	732.9	732.2	731.4	730.6	729.8	730.6	731.4	732.2
127.5°	789.5	790.1	790.6	790.1	788.5	786.9	785.4	783.8	785.4	786.9	788.5
130°	845.2	846.0	846.8	846.1	844.0	841.9	839.9	837.8	839.9	841.9	844.0
132.5°	899.8	900.3	900.9	900.1	898.0	895.9	893.8	891.7	893.8	895.9	898.0
135°	953.3	953.5	953.8	953.1	951.6	950.0	948.5	946.9	948.5	950.0	951.6
137.5°	1005.2	1004.4	1003.6	1002.6	1001.3	999.9	998.6	997.3	998.6	999.9	1001.3
140°	1056.7	1056.4	1056.1	1055.4	1054.1	1052.8	1051.4	1050.1	1051.4	1052.8	1054.1
142.5°	1105.4	1104.9	1104.4	1103.5	1102.2	1100.9	1099.6	1098.3	1099.6	1100.9	1102.2
145°	1153.0	1152.2	1151.4	1150.8	1150.3	1149.7	1149.2	1148.7	1149.2	1149.7	1150.3
147.5°	1198.8	1198.0	1197.2	1196.3	1195.2	1194.2	1193.2	1192.1	1193.2	1194.2	1195.2
150°	1241.5	1241.0	1240.5	1240.0	1239.4	1238.9	1238.4	1237.9	1238.4	1238.9	1239.4
152.5°	1279.6	1279.3	1279.1	1278.6	1277.8	1277.0	1276.2	1275.4	1276.2	1277.0	1277.8
155°	1316.0	1315.7	1315.4	1315.3	1315.3	1315.3	1315.3	1315.3	1315.3	1315.3	1315.3
157.5°	1348.8	1348.6	1348.3	1348.3	1348.6	1348.8	1349.1	1349.3	1349.1	1348.8	1348.6
160°	1378.7	1378.7	1378.7	1378.9	1379.5	1380.0	1380.5	1381.0	1380.5	1380.0	1379.5
162.5°	1406.3	1406.1	1405.8	1406.1	1406.8	1407.6	1408.4	1409.2	1408.4	1407.6	1406.8
165°	1429.1	1429.1	1429.1	1429.5	1430.3	1431.1	1431.9	1432.7	1431.9	1431.1	1430.3
167.5°	1448.6	1448.3	1448.0	1448.4	1449.5	1450.5	1451.6	1452.6	1451.6	1450.5	1449.5
170°	1464.3	1464.3	1464.3	1464.9	1465.9	1466.9	1468.0	1469.0	1468.0	1466.9	1465.9
172.5°	1477.2	1477.2	1477.2	1477.8	1478.8	1479.8	1480.9	1481.9	1480.9	1479.8	1478.8
175°	1485.5	1485.5	1485.5	1486.0	1487.0	1488.1	1489.1	1490.1	1489.1	1488.1	1487.0
177.5°	1490.1	1490.1	1490.1	1490.7	1491.7	1492.8	1493.8	1494.8	1493.8	1492.8	1491.7
180°	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	3277.0	3277.0	3277.0	3277.0	3277.0	3277.0	3277.0	3277.0	3277.0	3277.0	3277.0
2.5°	3172.2	3133.9	3095.6	3068.1	3040.6	3006.3	2972.0	2970.7	2969.4	2943.8	2918.3
5°	2984.1	2917.6	2851.1	2785.9	2720.8	2655.6	2590.5	2575.7	2560.9	2538.7	2516.6
7.5°	2817.5	2711.4	2605.2	2521.9	2438.6	2373.5	2308.3	2264.0	2219.6	2185.4	2151.1
10°	2638.8	2507.2	2375.5	2274.7	2173.9	2103.4	2032.9	1981.8	1930.7	1906.6	1882.4
12.5°	2453.4	2310.3	2167.2	2068.5	1969.7	1885.1	1800.4	1754.1	1707.7	1674.1	1640.5
15°	2282.8	2128.9	1975.1	1870.3	1765.5	1686.2	1606.9	1560.6	1514.2	1480.6	1447.1
17.5°	2117.5	1962.3	1807.1	1701.0	1594.9	1523.0	1451.1	1406.1	1361.1	1340.2	1319.4
20°	1967.0	1810.5	1654.0	1553.9	1453.8	1383.2	1312.7	1288.5	1264.3	1244.8	1225.4
22.5°	1817.9	1667.4	1516.9	1420.9	1324.8	1273.7	1222.7	1203.2	1183.7	1168.9	1154.2
25°	1692.9	1543.1	1393.3	1309.3	1225.4	1185.7	1146.1	1133.3	1120.6	1105.8	1091.0
27.5°	1566.6	1424.2	1281.8	1214.6	1147.4	1115.2	1082.9	1066.8	1050.7	1038.6	1026.5
30°	1455.1	1323.4	1191.8	1136.0	1080.3	1052.0	1023.8	1006.4	988.9	977.5	966.0
32.5°	1347.6	1230.7	1113.8	1066.1	1018.4	990.9	963.4	946.6	929.8	916.3	902.9
35°	1248.2	1146.8	1045.3	1001.7	958.0	930.4	902.9	886.1	869.3	855.9	842.4
37.5°	1160.9	1068.8	976.8	935.8	894.8	870.7	846.5	829.0	811.5	797.4	783.3
40°	1078.9	997.6	916.3	876.7	837.1	810.9	784.7	769.2	753.8	741.0	728.2
42.5°	1006.4	931.8	857.2	818.3	779.3	754.4	729.6	711.4	693.3	685.9	678.5
45°	929.8	863.9	798.1	760.5	722.9	696.7	670.5	655.0	639.6	632.8	626.1
47.5°	862.6	801.5	740.3	703.4	666.4	642.9	619.4	607.3	595.2	585.8	576.4
50°	796.8	737.6	678.5	642.9	607.3	587.2	567.0	552.2	537.4	530.7	524.0
52.5°	733.6	679.9	626.1	589.8	553.6	534.1	514.6	501.8	489.1	475.0	460.9
55°	662.4	615.4	568.3	536.1	503.8	483.7	463.5	448.8	434.0	419.2	404.4
57.5°	603.3	556.9	510.6	481.7	452.8	433.3	413.8	397.7	381.6	369.5	357.4
60°	538.8	498.5	458.2	430.0	401.7	382.9	364.1	348.7	333.2	327.2	321.1
62.5°	478.3	440.7	403.1	378.2	353.4	335.2	317.1	307.0	296.9	292.9	288.9
65°	416.5	384.3	352.0	329.2	306.3	290.9	275.4	270.7	266.0	262.7	259.3
67.5°	358.7	331.2	303.7	283.5	263.3	252.6	241.8	236.5	231.1	227.1	223.0
70°	306.3	282.2	258.0	240.5	223.0	213.0	202.9	198.2	193.5	186.1	178.7
72.5°	249.9	231.1	212.3	198.9	185.4	176.7	167.9	158.5	149.1	142.4	135.7
75°	206.9	188.1	169.3	156.5	143.8	133.7	123.6	120.3	116.9	114.9	112.9
77.5°	158.5	142.4	126.3	116.2	106.1	101.4	96.7	94.7	92.7	92.0	91.4
80°	114.2	100.8	87.3	82.0	76.6	75.2	73.9	72.6	71.2	70.5	69.9
82.5°	71.2	64.5	57.8	56.4	55.1	54.4	53.7	53.1	52.4	51.7	51.1
85°	41.7	39.0	36.3	35.6	34.9	34.3	33.6	33.6	33.6	33.6	33.6
87.5°	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	16.8	16.1
90°	11.6	14.6	18.0	21.4	24.8	28.2	29.2	30.2	31.3	32.3	33.1
92.5°	41.5	43.0	44.6	46.2	47.7	49.3	50.1	50.8	51.6	52.4	52.5
95°	76.5	78.5	80.6	82.7	84.7	86.8	87.9	88.9	90.0	91.0	91.5
97.5°	119.0	120.5	122.0	123.6	125.2	126.7	128.0	129.3	130.6	131.9	132.5
100°	165.8	167.3	168.6	169.9	171.2	172.5	173.3	174.0	174.8	175.6	176.3
102.5°	215.5	216.8	218.6	220.5	222.3	224.1	224.9	225.7	226.5	227.2	227.5
105°	266.1	267.5	269.9	272.2	274.6	276.9	276.9	276.9	276.9	276.9	277.2
107.5°	326.1	326.7	327.8	328.8	329.8	330.9	331.7	332.4	333.2	334.0	334.3
110°	383.4	383.9	384.5	385.0	385.5	386.0	387.1	388.1	389.2	390.2	390.5



TEST NUMBER: P831799

CATALOG NUMBER: S123RDIP-S1000D1195U840-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	441.0	441.2	441.2	441.2	441.2	441.2	442.5	443.8	445.1	446.4	447.0
115°	501.8	501.9	501.4	500.9	500.4	499.8	500.1	500.4	500.6	500.9	500.9
117.5°	559.6	559.4	558.9	558.4	557.9	557.3	557.3	557.3	557.3	557.3	556.9
120°	619.9	620.0	618.7	617.4	616.1	614.8	614.6	614.3	614.1	613.8	613.4
122.5°	675.3	675.6	675.1	674.5	674.0	673.5	672.7	671.9	671.2	670.4	669.6
125°	732.9	733.1	732.6	732.0	731.5	731.0	730.0	728.9	727.9	726.8	725.8
127.5°	790.1	790.6	790.1	789.5	789.0	788.5	786.9	785.4	783.8	782.2	780.9
130°	846.1	846.8	846.0	845.2	844.4	843.6	842.6	841.5	840.5	839.5	838.0
132.5°	900.1	900.9	900.3	899.8	899.3	898.8	897.5	896.2	894.9	893.6	892.3
135°	953.1	953.8	953.5	953.3	953.0	952.8	951.7	950.7	949.6	948.6	947.8
137.5°	1002.6	1003.6	1004.4	1005.2	1005.9	1006.7	1005.4	1004.1	1002.8	1001.5	1000.5
140°	1055.4	1056.1	1056.4	1056.7	1056.9	1057.2	1056.9	1056.7	1056.4	1056.1	1055.1
142.5°	1103.5	1104.4	1104.9	1105.4	1105.9	1106.5	1106.2	1105.9	1105.7	1105.4	1104.6
145°	1150.8	1151.4	1152.2	1153.0	1153.8	1154.6	1154.3	1154.0	1153.8	1153.5	1152.9
147.5°	1196.3	1197.2	1198.0	1198.8	1199.5	1200.3	1200.3	1200.3	1200.3	1200.3	1199.5
150°	1240.0	1240.5	1241.0	1241.5	1242.0	1242.6	1242.6	1242.6	1242.6	1242.6	1241.8
152.5°	1278.6	1279.1	1279.3	1279.6	1279.9	1280.1	1280.6	1281.2	1281.7	1282.2	1281.8
155°	1315.3	1315.4	1315.7	1316.0	1316.2	1316.5	1317.5	1318.6	1319.6	1320.7	1320.3
157.5°	1348.3	1348.3	1348.6	1348.8	1349.1	1349.3	1350.4	1351.4	1352.5	1353.5	1353.3
160°	1378.9	1378.7	1378.7	1378.7	1378.7	1378.7	1380.0	1381.3	1382.6	1383.9	1384.0
162.5°	1406.1	1405.8	1406.1	1406.3	1406.6	1406.8	1408.1	1409.4	1410.8	1412.1	1411.8
165°	1429.5	1429.1	1429.1	1429.1	1429.1	1429.1	1430.7	1432.3	1433.8	1435.4	1435.3
167.5°	1448.4	1448.0	1448.3	1448.6	1448.8	1449.1	1450.6	1452.2	1453.8	1455.3	1455.3
170°	1464.9	1464.3	1464.3	1464.3	1464.3	1464.3	1466.2	1468.0	1469.8	1471.6	1471.6
172.5°	1477.8	1477.2	1477.2	1477.2	1477.2	1477.2	1478.8	1480.4	1481.9	1483.5	1483.4
175°	1486.0	1485.5	1485.5	1485.5	1485.5	1485.5	1487.0	1488.6	1490.1	1491.7	1491.6
177.5°	1490.7	1490.1	1490.1	1490.1	1490.1	1490.1	1491.7	1493.3	1494.8	1496.4	1496.3
180°	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7



TEST NUMBER: P831799

CATALOG NUMBER: S123RDIP-S1000D1195U840-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	3277.0	3277.0	3277.0	3277.0
2.5°	2911.6	2904.9	2902.2	2899.5
5°	2495.7	2474.9	2470.2	2465.5
7.5°	2142.4	2133.6	2104.7	2075.9
10°	1855.5	1828.6	1816.5	1804.5
12.5°	1615.7	1590.8	1586.8	1582.8
15°	1429.6	1412.1	1406.1	1400.0
17.5°	1307.3	1295.2	1287.8	1280.4
20°	1216.6	1207.9	1202.5	1197.1
22.5°	1147.4	1140.7	1136.7	1132.7
25°	1080.9	1070.8	1067.5	1064.1
27.5°	1017.8	1009.0	1005.7	1002.3
30°	958.7	951.3	946.6	941.9
32.5°	894.2	885.4	882.7	880.1
35°	837.1	831.7	829.0	826.3
37.5°	776.6	769.9	765.9	761.8
40°	724.9	721.5	719.5	717.5
42.5°	672.5	666.4	665.8	665.1
45°	620.1	614.0	612.7	611.3
47.5°	571.0	565.7	565.0	564.3
50°	516.6	509.2	503.8	498.5
52.5°	454.1	447.4	442.7	438.0
55°	397.0	389.6	385.6	381.6
57.5°	354.0	350.7	348.7	346.6
60°	319.1	317.1	315.7	314.4
62.5°	286.9	284.8	284.8	284.8
65°	257.3	255.3	253.3	251.3
67.5°	219.0	215.0	214.3	213.6
70°	172.7	166.6	165.9	165.3
72.5°	135.0	134.4	133.0	131.7
75°	111.5	110.2	110.2	110.2
77.5°	90.0	88.7	88.7	88.7
80°	69.2	68.5	69.2	69.9
82.5°	51.1	51.1	50.4	49.7
85°	32.9	32.2	32.2	32.2
87.5°	16.1	16.1	16.1	16.1
90°	33.6	34.2	34.7	35.2
92.5°	52.0	51.5	51.0	50.5
95°	91.5	91.5	91.5	91.5
97.5°	132.2	131.9	131.7	131.4
100°	176.8	177.3	177.8	178.3
102.5°	227.2	227.0	226.7	226.5
105°	277.7	278.2	278.7	279.3
107.5°	334.0	333.8	333.5	333.2
110°	389.9	389.4	388.9	388.4



TEST NUMBER: P831799

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CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	447.0	447.0	447.0	447.0
115°	500.6	500.4	500.1	499.8
117.5°	556.2	555.4	554.6	553.8
120°	612.9	612.4	611.8	611.3
122.5°	668.8	668.0	667.2	666.5
125°	724.7	723.7	722.6	721.6
127.5°	779.9	778.8	777.8	776.8
130°	836.2	834.4	832.6	830.7
132.5°	891.0	889.7	888.4	887.0
135°	947.3	946.8	946.2	945.7
137.5°	999.7	998.9	998.1	997.3
140°	1053.3	1051.4	1049.6	1047.8
142.5°	1103.3	1102.0	1100.7	1099.4
145°	1151.8	1150.8	1149.7	1148.7
147.5°	1198.0	1196.4	1194.9	1193.3
150°	1240.2	1238.7	1237.1	1235.5
152.5°	1280.5	1279.2	1277.9	1276.6
155°	1318.4	1316.6	1314.8	1313.0
157.5°	1351.7	1350.1	1348.6	1347.0
160°	1383.0	1381.9	1380.9	1379.9
162.5°	1410.0	1408.1	1406.3	1404.5
165°	1433.4	1431.6	1429.8	1428.0
167.5°	1453.8	1452.2	1450.6	1449.1
170°	1469.8	1468.0	1466.2	1464.3
172.5°	1481.5	1479.7	1477.9	1476.1
175°	1489.8	1487.9	1486.1	1484.3
177.5°	1494.4	1492.6	1490.8	1489.0
180°	1493.7	1493.7	1493.7	1493.7



TEST NUMBER: P831799

CATALOG NUMBER: S123RDIP-S1000D1195U840-4F0-1E-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	13.24	14.06	14.20	15.02	16.28	17.90	18.72	18.86	19.69	20.94
	3H	14.46	15.19	15.43	16.17	17.45	19.40	20.13	20.37	21.11	22.39
	4H	14.84	15.53	15.83	16.51	17.80	19.89	20.58	20.88	21.56	22.85
	6H	15.12	15.76	16.12	16.74	18.04	20.20	20.84	21.20	21.82	23.12
	8H	15.21	15.81	16.21	16.81	18.11	20.28	20.88	21.28	21.88	23.18
	12H	15.26	15.83	16.27	16.83	18.15	20.31	20.89	21.32	21.88	23.20
4H	2H	13.96	14.65	14.95	15.63	16.92	17.90	18.59	18.89	19.57	20.86
	3H	15.33	15.90	16.33	16.91	18.21	19.56	20.13	20.55	21.14	22.44
	4H	15.79	16.31	16.79	17.31	18.64	20.16	20.68	21.17	21.69	23.01
	6H	16.15	16.60	17.17	17.63	18.95	20.60	21.05	21.62	22.07	23.40
	8H	16.28	16.70	17.30	17.71	19.05	20.73	21.15	21.75	22.17	23.50
	12H	16.35	16.73	17.39	17.76	19.11	20.79	21.17	21.83	22.20	23.54
8H	4H	16.10	16.52	17.12	17.53	18.87	20.13	20.55	21.15	21.56	22.90
	6H	16.56	16.91	17.60	17.97	19.30	20.62	20.97	21.66	22.03	23.36
	8H	16.76	17.06	17.80	18.10	19.46	20.81	21.11	21.86	22.16	23.51
	12H	16.89	17.16	17.95	18.20	19.60	20.93	21.19	21.98	22.23	23.63
12H	4H	16.11	16.49	17.14	17.52	18.86	20.08	20.45	21.11	21.49	22.83
	6H	16.62	16.92	17.67	17.97	19.32	20.60	20.90	21.65	21.95	23.30
	8H	16.84	17.10	17.89	18.14	19.54	20.79	21.06	21.84	22.10	23.50