

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: P831851

Luminaire Tested: S123RDIP-S1000D585U835-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831851
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-17)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDIP-S1000D585U835-4F0-1E-UDD-G4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: -

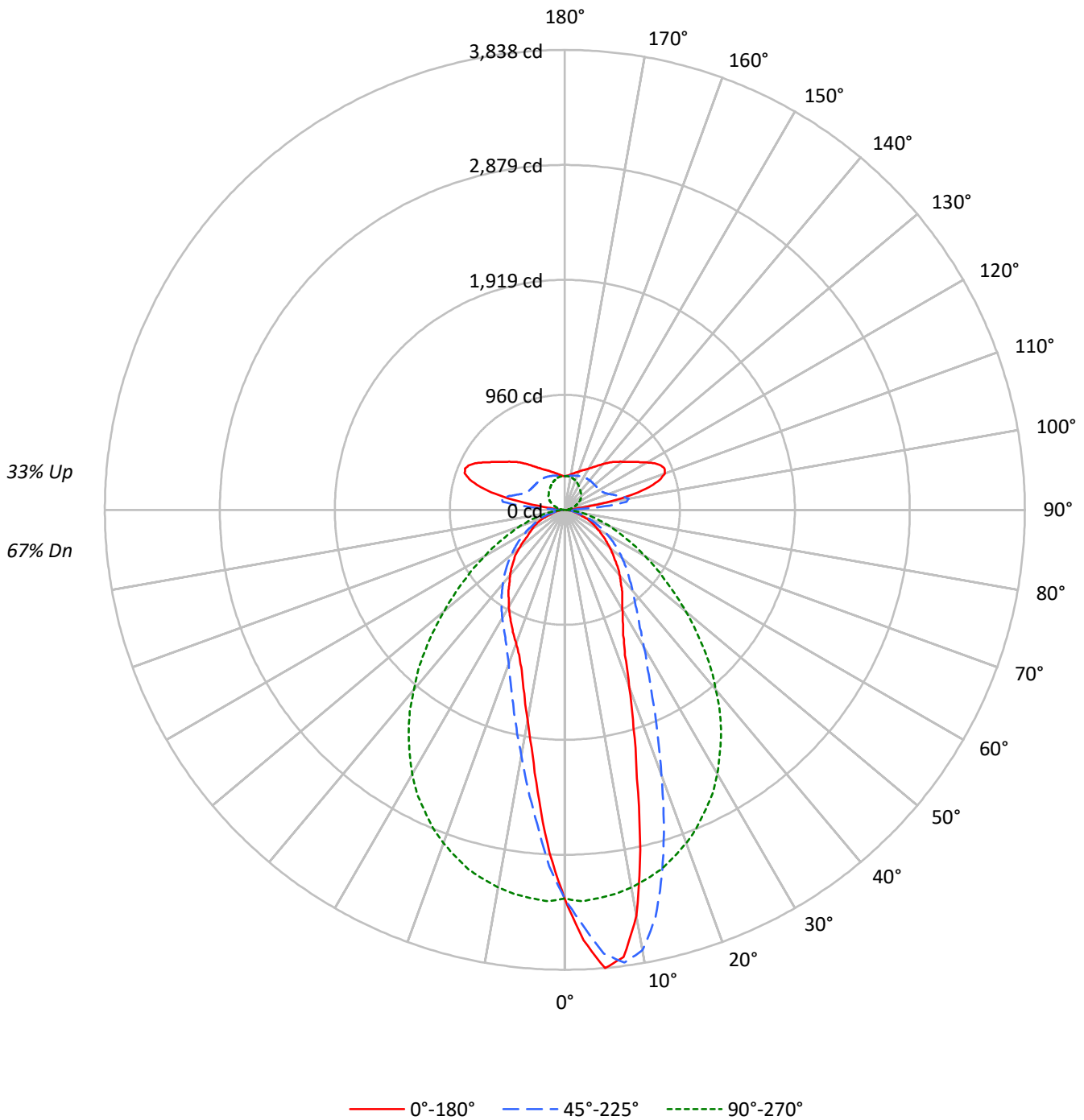
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6423.4 lumens
Efficiency: N/A
Efficacy: 127.7 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): 50.3
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				
RC	80					70					50					30				
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																				
0	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67		
1	103	99	95	92	97	93	90	87	83	81	79	74	72	70	65	64	63	59		
2	94	87	82	77	89	83	78	73	74	70	67	66	63	61	59	56	55	51		
3	87	78	71	66	82	74	68	63	67	62	58	60	56	53	53	50	48	45		
4	80	70	63	57	76	67	60	55	60	55	50	54	50	46	48	45	42	39		
5	74	63	56	50	70	60	53	48	55	49	45	49	45	41	44	41	38	35		
6	69	57	50	44	65	55	48	43	50	44	40	45	41	37	41	37	34	32		
7	64	53	45	40	61	50	43	38	46	40	36	42	37	33	38	34	31	29		
8	60	48	41	36	57	46	39	35	42	37	33	39	34	30	35	31	28	26		
9	56	45	37	32	53	43	36	32	39	34	30	36	31	28	33	29	26	24		
10	53	41	34	30	50	40	33	29	37	31	27	34	29	26	31	27	24	22		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	34929	34929	34929	34929	34929
5°	41474	40151	35149	28414	26379
10°	37576	40783	34974	22766	19530
15°	25872	34968	34604	18607	15450
20°	17999	26922	33909	15690	13580
25°	13715	20518	32898	13944	12514
30°	11939	16404	31635	12949	11593
35°	10962	13838	29843	12107	10751
40°	10002	12357	27500	11282	9983
45°	9033	11301	24972	10500	9216
50°	8199	10428	21990	9736	8266
55°	7416	9575	19125	8989	7092
60°	6646	8708	16613	8163	6702
65°	6133	7725	14301	7335	6337
70°	4982	6678	12478	6637	5149
75°	4371	5311	10568	5506	4537
80°	3961	4494	8660	4618	4289
85°	3619	3940	6570	4187	3940

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 26349 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	295.8	4.6
10°-20°	684.4	10.7
20°-30°	785.3	12.2
30°-40°	774.0	12.0
40°-50°	682.6	10.6
50°-60°	525.1	8.2
60°-70°	345.2	5.4
70°-80°	167.7	2.6
80°-90°	43.8	0.7
90°-100°	152.9	2.4
100°-110°	447.6	7.0
110°-120°	437.1	6.8
120°-130°	348.1	5.4
130°-140°	274.7	4.3
140°-150°	204.9	3.2
150°-160°	142.9	2.2
160°-170°	83.9	1.3
170°-180°	27.3	0.4
0°-30°	1765.5	27.5
0°-40°	2539.5	39.5
0°-60°	3747.2	58.3
0°-90°	4304.0	67.0
90°-120°	1037.7	16.2
90°-150°	1865.4	29.0
90°-180°	2119.0	33.0
0°-180°	6423.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3245	3245	3245	3245	3245	
5°	3838	3716	3253	2630	2441	351
15°	2322	3138	3105	1670	1386	655
25°	1155	1728	2770	1174	1054	545
35°	834	1053	2271	921	818	520
45°	593	742	1640	690	605	461
55°	395	510	1019	479	378	354
65°	241	303	562	288	249	236
75°	105	128	254	132	109	113
85°	29	32	53	34	32	31
90°	16	14	1	14	16	10
95°	66	338	19	338	66	108
105°	726	459	66	459	726	724
115°	882	351	117	351	882	860
125°	696	327	163	327	696	630
135°	564	323	190	323	564	438
145°	441	319	217	319	441	280
155°	366	309	247	309	366	170
165°	319	296	270	296	319	91
175°	287	284	281	284	287	28
180°	282	282	282	282	282	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3245.0	3245.0	3245.0	3245.0	3245.0	3245.0	3245.0	3245.0	3245.0	3245.0	3245.0
2.5°	3596.3	3585.0	3573.6	3570.3	3567.0	3556.4	3545.7	3521.8	3497.8	3473.2	3448.6
5°	3838.4	3839.7	3841.1	3837.7	3834.4	3820.4	3806.5	3777.2	3747.9	3716.0	3684.1
7.5°	3763.9	3785.2	3806.5	3810.5	3814.5	3825.1	3835.8	3829.1	3822.4	3810.5	3798.5
10°	3437.9	3436.6	3435.3	3459.2	3483.2	3554.4	3625.5	3662.1	3698.7	3731.3	3763.9
12.5°	2905.8	2907.7	2909.7	2988.2	3066.7	3133.9	3201.1	3294.2	3387.4	3487.8	3588.3
15°	2321.7	2354.3	2386.9	2456.7	2526.6	2627.7	2728.8	2853.9	2978.9	3137.9	3296.9
17.5°	1906.6	1920.5	1934.5	2001.7	2068.9	2164.7	2260.5	2402.2	2543.9	2748.8	2953.6
20°	1571.3	1583.9	1596.6	1645.1	1693.7	1785.5	1877.3	2012.3	2147.4	2350.3	2553.2
22.5°	1311.8	1336.5	1361.1	1393.7	1426.3	1492.8	1559.3	1697.0	1834.7	2019.7	2204.6
25°	1154.8	1166.2	1177.5	1205.4	1233.3	1297.2	1361.1	1452.2	1543.3	1727.6	1911.9
27.5°	1048.4	1051.7	1055.1	1075.7	1096.3	1137.6	1178.8	1263.3	1347.8	1499.4	1651.1
30°	960.6	966.6	972.6	988.5	1004.5	1034.4	1064.4	1124.2	1184.1	1319.8	1455.5
32.5°	892.7	896.1	899.4	912.7	926.0	948.0	969.9	1017.1	1064.4	1168.2	1271.9
35°	834.2	834.9	835.5	845.5	855.5	876.8	898.1	937.3	976.6	1053.1	1129.6
37.5°	767.7	772.3	777.0	784.3	791.6	810.3	828.9	860.8	892.7	955.9	1019.1
40°	711.8	715.8	719.8	728.4	737.1	751.7	766.4	795.6	824.9	879.4	934.0
42.5°	655.9	658.6	661.2	669.9	678.5	696.5	714.5	737.7	761.0	806.3	851.5
45°	593.4	600.0	606.7	616.0	625.3	640.6	655.9	679.9	703.8	742.4	781.0
47.5°	541.5	544.8	548.2	556.1	564.1	582.7	601.4	622.7	643.9	679.9	715.8
50°	489.6	490.9	492.3	499.6	506.9	523.5	540.2	564.8	589.4	622.7	655.9
52.5°	440.4	443.7	447.0	454.4	461.7	473.0	484.3	509.6	534.8	567.4	600.0
55°	395.2	397.1	399.1	404.5	409.8	423.1	436.4	458.3	480.3	510.2	540.2
57.5°	352.6	355.2	357.9	361.9	365.9	377.9	389.8	409.1	428.4	458.3	488.3
60°	308.7	312.0	315.3	320.0	324.6	333.9	343.3	360.6	377.9	404.5	431.1
62.5°	276.7	277.4	278.1	282.1	286.1	292.7	299.4	313.3	327.3	353.9	380.5
65°	240.8	242.8	244.8	246.8	248.8	254.1	259.4	271.4	283.4	303.3	323.3
67.5°	203.6	205.6	207.6	210.9	214.2	218.9	223.5	231.5	239.5	258.1	276.7
70°	158.3	158.3	158.3	163.6	169.0	177.0	184.9	190.9	196.9	212.2	227.5
72.5°	129.1	129.7	130.4	131.1	131.7	136.4	141.0	151.0	161.0	170.3	179.6
75°	105.1	105.8	106.4	107.1	107.8	109.1	110.4	113.8	117.1	127.7	138.4
77.5°	83.8	84.5	85.2	85.8	86.5	87.8	89.1	90.5	91.8	95.8	99.8
80°	63.9	64.5	65.2	65.9	66.5	67.2	67.9	69.2	70.5	72.5	74.5
82.5°	46.6	46.6	46.6	46.6	46.6	47.9	49.2	49.2	49.2	50.6	51.9
85°	29.3	29.3	29.3	29.9	30.6	30.6	30.6	31.3	31.9	31.9	31.9
87.5°	13.3	12.6	12.0	12.6	13.3	13.3	13.3	14.0	14.6	14.6	14.6
90°	16.5	17.1	16.5	16.0	16.5	15.4	14.8	14.3	13.7	14.3	12.5
92.5°	30.2	31.4	30.8	33.1	34.2	38.2	43.9	56.5	79.3	106.1	117.5
95°	66.2	68.4	72.4	77.6	88.4	108.9	139.2	205.3	274.3	338.2	301.2
97.5°	135.7	142.0	155.7	177.4	215.6	280.6	355.9	471.7	537.9	520.2	388.4
100°	357.6	357.1	379.3	420.9	478.5	559.5	626.3	672.5	652.5	540.1	365.0
102.5°	566.4	582.9	600.6	631.4	673.0	717.0	748.9	739.2	658.2	503.1	330.8
105°	725.5	728.4	746.6	768.3	794.5	809.4	798.5	741.5	622.3	458.6	304.0
107.5°	829.3	835.6	843.0	853.3	856.7	841.3	796.8	707.3	570.9	419.2	284.6
110°	888.6	889.8	890.9	886.4	870.4	830.5	758.6	653.6	523.0	386.7	274.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	900.6	900.1	894.3	877.8	845.3	791.1	708.4	600.6	481.4	365.0	268.6
115°	882.4	879.5	868.1	843.0	800.2	738.1	654.2	555.0	449.5	350.8	268.1
117.5°	842.4	838.4	821.3	793.4	748.9	684.4	607.4	519.6	428.4	341.1	268.6
120°	790.0	786.5	772.9	740.9	695.9	638.2	569.8	492.8	412.4	334.8	270.9
122.5°	740.9	736.4	721.0	693.0	654.2	601.7	539.6	471.7	399.3	330.8	274.9
125°	695.9	691.9	677.6	652.5	616.0	570.4	515.6	453.4	388.4	327.4	278.9
127.5°	657.1	653.6	640.5	618.9	585.8	543.6	493.4	436.9	378.2	325.7	283.5
130°	625.1	620.6	608.6	588.1	557.8	519.0	472.8	421.5	370.2	324.0	288.0
132.5°	593.8	590.9	580.6	560.1	532.2	495.7	453.4	407.2	362.8	323.4	291.5
135°	564.1	560.1	549.8	532.7	504.8	472.3	435.2	394.7	356.5	322.8	294.9
137.5°	532.7	529.3	520.8	503.1	479.1	450.0	416.9	382.7	350.8	321.7	297.2
140°	499.6	500.2	491.1	475.1	453.4	428.9	401.5	372.5	345.6	321.1	299.4
142.5°	468.8	469.4	461.4	447.7	430.1	409.5	386.7	362.8	341.1	320.0	301.2
145°	440.9	439.8	435.2	423.2	409.0	392.4	374.2	355.3	337.1	318.8	301.7
147.5°	416.9	416.4	411.8	403.3	391.8	379.9	364.5	349.1	333.1	317.1	301.7
150°	396.4	396.4	393.0	386.7	378.2	367.3	355.3	342.2	329.1	314.8	301.7
152.5°	379.3	379.3	377.6	371.9	365.6	357.1	346.8	336.0	324.5	312.0	300.0
155°	365.6	365.0	363.9	359.3	354.2	347.4	338.8	329.7	320.0	308.6	298.9
157.5°	352.5	352.5	351.4	347.9	343.4	337.7	330.8	322.8	314.8	305.7	297.2
160°	339.9	340.5	340.5	337.1	333.1	329.1	323.4	317.1	309.7	302.3	296.0
162.5°	328.5	329.1	329.1	326.3	324.0	320.6	315.4	310.3	304.6	298.9	293.7
165°	318.8	318.8	319.4	317.1	314.8	312.0	308.0	304.6	300.0	295.5	291.5
167.5°	309.1	309.1	309.7	308.0	306.9	304.6	302.3	299.4	295.5	292.0	289.2
170°	300.6	300.6	301.2	300.0	299.4	298.3	296.0	294.3	291.5	288.6	286.9
172.5°	292.6	293.2	294.3	293.2	293.2	292.6	290.9	289.8	287.5	285.8	285.2
175°	286.9	287.5	288.0	287.5	287.5	287.5	286.3	285.8	284.6	283.5	283.5
177.5°	282.9	282.9	284.0	283.5	284.0	284.0	283.5	282.9	282.3	281.8	282.3
180°	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	3245.0	3245.0	3245.0	3245.0	3245.0	3245.0	3245.0	3245.0	3245.0	3245.0	3245.0
2.5°	3445.3	3441.9	3410.0	3378.1	3346.8	3315.5	3292.3	3269.0	3229.7	3190.5	3165.9
5°	3658.8	3633.5	3583.0	3532.4	3456.6	3380.7	3316.9	3253.0	3171.8	3090.7	3022.8
7.5°	3777.9	3757.3	3696.1	3634.8	3534.4	3433.9	3334.2	3234.4	3114.6	2994.9	2892.4
10°	3781.2	3798.5	3747.9	3697.4	3584.3	3471.2	3335.5	3199.8	3038.8	2877.8	2745.4
12.5°	3662.8	3737.3	3726.7	3716.0	3600.9	3485.8	3320.9	3155.9	2958.3	2760.7	2595.1
15°	3441.3	3585.6	3628.2	3670.8	3575.6	3480.5	3292.9	3105.3	2873.2	2641.0	2450.7
17.5°	3155.9	3358.1	3470.5	3583.0	3513.8	3444.6	3239.0	3033.5	2772.0	2510.6	2303.7
20°	2817.9	3082.7	3259.0	3435.3	3410.0	3384.7	3172.5	2960.3	2678.2	2396.2	2172.0
22.5°	2484.0	2763.4	3006.9	3250.3	3276.3	3302.2	3088.0	2873.8	2565.1	2256.5	2028.3
25°	2195.9	2480.0	2770.0	3060.1	3118.6	3177.2	2973.6	2770.0	2450.1	2130.1	1903.2
27.5°	1921.2	2191.3	2510.6	2829.9	2936.4	3042.8	2856.5	2670.3	2337.0	2003.7	1777.5
30°	1697.0	1938.5	2264.5	2590.4	2738.8	2887.1	2716.2	2545.2	2214.6	1883.9	1662.4
32.5°	1488.1	1704.3	2031.6	2358.9	2531.2	2703.5	2555.8	2408.2	2090.2	1772.2	1553.3
35°	1323.2	1516.7	1822.1	2127.4	2320.3	2513.3	2392.2	2271.1	1960.5	1649.8	1442.9
37.5°	1181.5	1343.8	1630.5	1917.2	2122.1	2327.0	2225.9	2124.8	1832.7	1540.7	1345.1
40°	1064.4	1194.8	1461.5	1728.3	1929.2	2130.1	2043.6	1957.1	1695.7	1434.2	1251.3
42.5°	963.9	1076.4	1315.8	1555.3	1739.6	1923.9	1866.7	1809.4	1572.6	1335.8	1166.2
45°	875.5	969.9	1180.8	1391.7	1561.3	1730.9	1685.7	1640.5	1436.2	1232.0	1076.4
47.5°	797.0	878.1	1066.4	1254.6	1407.0	1559.3	1517.4	1475.5	1306.5	1137.6	995.9
50°	725.1	794.3	951.3	1108.3	1245.3	1382.4	1347.8	1313.2	1173.5	1033.8	911.4
52.5°	657.3	714.5	855.5	996.5	1107.0	1217.4	1190.8	1164.2	1056.4	948.6	837.5
55°	592.7	645.3	764.4	883.4	977.9	1072.4	1045.8	1019.1	935.3	851.5	753.7
57.5°	534.2	580.1	676.5	773.0	848.2	923.3	910.7	898.1	828.2	758.4	677.9
60°	472.3	513.6	596.7	679.9	740.4	800.9	786.3	771.7	721.8	671.9	602.7
62.5°	417.1	453.7	520.2	586.7	636.0	685.2	674.5	663.9	626.0	588.1	530.9
65°	359.2	395.2	449.0	502.9	541.5	580.1	570.8	561.5	532.9	504.2	458.3
67.5°	306.7	336.6	383.2	429.7	455.7	481.6	476.3	471.0	449.0	427.1	391.2
70°	253.5	279.4	318.0	356.6	374.5	392.5	394.5	396.5	376.5	356.6	330.0
72.5°	200.2	220.9	256.8	292.7	306.7	320.6	320.0	319.3	307.3	295.4	271.4
75°	153.7	169.0	196.9	224.8	236.8	248.8	251.5	254.1	242.8	231.5	218.2
77.5°	110.4	121.1	142.4	163.6	177.0	190.3	191.6	192.9	187.6	182.3	169.6
80°	77.8	81.2	94.5	107.8	121.7	135.7	137.7	139.7	134.4	129.1	121.1
82.5°	53.9	55.9	60.5	65.2	76.5	87.8	90.5	93.1	90.5	87.8	79.2
85°	32.6	33.3	35.3	37.3	42.6	47.9	50.6	53.2	51.9	50.6	45.9
87.5°	14.6	14.6	15.3	16.0	17.3	18.6	22.0	25.3	23.3	21.3	19.3
90°	10.8	9.1	7.4	6.3	5.1	3.4	2.3	1.1	2.3	3.4	5.1
92.5°	87.8	57.6	39.4	29.1	23.4	18.3	12.5	8.6	12.5	18.3	23.4
95°	207.6	122.6	74.1	51.9	37.1	27.4	21.1	19.4	21.1	27.4	37.1
97.5°	231.0	132.3	84.4	59.9	45.1	36.5	31.4	30.8	31.4	36.5	45.1
100°	215.0	130.6	90.7	68.4	54.8	46.8	42.8	42.2	42.8	46.8	54.8
102.5°	201.3	132.9	98.1	78.1	66.2	58.7	55.3	54.2	55.3	58.7	66.2
105°	196.2	137.5	106.7	89.0	78.1	71.3	67.9	66.2	67.9	71.3	78.1
107.5°	195.1	144.9	117.5	101.0	90.7	83.8	80.4	78.7	80.4	83.8	90.7
110°	197.9	154.6	128.9	112.9	103.2	97.0	94.1	92.4	94.1	97.0	103.2



TEST NUMBER: P831851

CATALOG NUMBER: S123RDIP-S1000D585U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	203.6	164.3	140.9	125.5	115.8	109.5	106.7	104.9	106.7	109.5	115.8
115°	209.9	175.1	153.4	138.0	128.3	122.6	119.2	116.9	119.2	122.6	128.3
117.5°	217.9	186.5	164.8	150.6	139.7	134.6	131.8	128.9	131.8	134.6	139.7
120°	227.0	197.3	176.8	162.6	151.7	146.0	143.2	141.5	143.2	146.0	151.7
122.5°	235.6	208.8	188.8	173.4	163.1	156.9	154.0	152.3	154.0	156.9	163.1
125°	244.7	219.6	199.6	184.2	173.4	167.1	163.7	162.6	163.7	167.1	173.4
127.5°	252.1	229.3	209.9	194.5	182.5	176.2	172.3	170.5	172.3	176.2	182.5
130°	259.5	237.8	219.0	203.6	191.6	184.8	179.7	178.0	179.7	184.8	191.6
132.5°	266.4	245.3	227.0	212.2	200.2	191.6	185.9	183.7	185.9	191.6	200.2
135°	272.1	252.7	235.0	219.6	207.6	199.1	192.8	190.5	192.8	199.1	207.6
137.5°	276.6	257.8	240.7	226.4	214.5	205.3	199.1	196.8	199.1	205.3	214.5
140°	280.1	262.9	246.4	232.1	220.7	211.6	205.9	203.1	205.9	211.6	220.7
142.5°	283.5	266.9	251.0	237.8	226.4	218.5	212.2	209.9	212.2	218.5	226.4
145°	285.8	270.4	255.5	242.4	232.7	224.2	219.0	217.3	219.0	224.2	232.7
147.5°	287.5	273.2	259.5	248.1	238.4	231.0	225.9	224.7	225.9	231.0	238.4
150°	288.0	276.1	262.9	252.7	244.7	237.3	232.7	232.1	232.7	237.3	244.7
152.5°	289.2	277.8	266.9	257.2	250.4	244.1	239.6	239.6	239.6	244.1	250.4
155°	289.2	280.1	270.4	262.4	256.1	250.4	247.0	247.0	247.0	250.4	256.1
157.5°	289.8	281.2	273.2	266.9	261.2	256.1	253.2	252.7	253.2	256.1	261.2
160°	289.8	282.9	276.1	270.4	266.4	261.8	259.5	259.5	259.5	261.8	266.4
162.5°	289.2	283.5	277.8	273.2	269.8	266.4	264.7	264.7	264.7	266.4	269.8
165°	288.0	284.0	279.5	275.5	273.2	270.4	269.2	269.8	269.2	270.4	273.2
167.5°	287.5	284.0	280.6	277.8	276.1	273.8	273.2	273.8	273.2	273.8	276.1
170°	285.8	283.5	280.6	279.5	278.3	276.6	276.1	277.2	276.1	276.6	278.3
172.5°	285.2	283.5	281.2	280.6	280.1	278.9	278.9	279.5	278.9	278.9	280.1
175°	284.0	282.9	281.8	281.2	281.2	280.1	280.6	281.2	280.6	280.1	281.2
177.5°	283.5	282.3	281.8	281.8	281.8	281.2	281.8	282.3	281.8	281.2	281.8
180°	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8



TEST NUMBER: P831851

CATALOG NUMBER: S123RDIP-S1000D585U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	3245.0	3245.0	3245.0	3245.0	3245.0	3245.0	3245.0	3245.0	3245.0	3245.0	3245.0
2.5°	3141.2	3103.3	3065.4	3038.1	3010.9	2976.9	2943.0	2941.7	2940.3	2915.1	2889.8
5°	2955.0	2889.1	2823.3	2758.7	2694.2	2629.7	2565.1	2550.5	2535.9	2513.9	2492.0
7.5°	2790.0	2684.9	2579.8	2497.3	2414.8	2350.3	2285.8	2241.8	2197.9	2164.0	2130.1
10°	2613.0	2482.7	2352.3	2252.5	2152.7	2082.9	2013.0	1962.4	1911.9	1887.9	1864.0
12.5°	2429.4	2287.7	2146.1	2048.3	1950.5	1866.7	1782.8	1736.9	1691.0	1657.8	1624.5
15°	2260.5	2108.1	1955.8	1852.0	1748.2	1669.7	1591.2	1545.3	1499.4	1466.2	1432.9
17.5°	2096.8	1943.2	1789.5	1684.4	1579.3	1508.1	1436.9	1392.3	1347.8	1327.1	1306.5
20°	1947.8	1792.8	1637.8	1538.7	1439.6	1369.7	1299.9	1275.9	1252.0	1232.7	1213.4
22.5°	1800.1	1651.1	1502.1	1407.0	1311.8	1261.3	1210.7	1191.4	1172.1	1157.5	1142.9
25°	1676.4	1528.0	1379.7	1296.5	1213.4	1174.1	1134.9	1122.3	1109.6	1095.0	1080.3
27.5°	1551.3	1410.3	1269.3	1202.7	1136.2	1104.3	1072.4	1056.4	1040.4	1028.5	1016.5
30°	1440.9	1310.5	1180.1	1124.9	1069.7	1041.8	1013.8	996.5	979.2	967.9	956.6
32.5°	1334.5	1218.7	1103.0	1055.7	1008.5	981.2	953.9	937.3	920.7	907.4	894.1
35°	1236.0	1135.6	1035.1	991.9	948.6	921.4	894.1	877.4	860.8	847.5	834.2
37.5°	1149.5	1058.4	967.3	926.7	886.1	862.1	838.2	820.9	803.6	789.6	775.7
40°	1068.4	987.9	907.4	868.1	828.9	802.9	777.0	761.7	746.4	733.8	721.1
42.5°	996.5	922.7	848.8	810.3	771.7	747.1	722.4	704.5	686.5	679.2	671.9
45°	920.7	855.5	790.3	753.0	715.8	689.8	663.9	648.6	633.3	626.7	620.0
47.5°	854.2	793.6	733.1	696.5	659.9	636.6	613.3	601.4	589.4	580.1	570.8
50°	789.0	730.4	671.9	636.6	601.4	581.4	561.5	546.8	532.2	525.5	518.9
52.5°	726.4	673.2	620.0	584.1	548.2	528.9	509.6	496.9	484.3	470.3	456.4
55°	655.9	609.4	562.8	530.9	498.9	479.0	459.0	444.4	429.7	415.1	400.5
57.5°	597.4	551.5	505.6	477.0	448.4	429.1	409.8	393.8	377.9	365.9	353.9
60°	533.5	493.6	453.7	425.8	397.8	379.2	360.6	345.3	330.0	324.0	318.0
62.5°	473.6	436.4	399.1	374.5	349.9	332.0	314.0	304.0	294.0	290.0	286.1
65°	412.4	380.5	348.6	326.0	303.3	288.0	272.7	268.1	263.4	260.1	256.8
67.5°	355.2	328.0	300.7	280.7	260.8	250.1	239.5	234.2	228.8	224.8	220.9
70°	303.3	279.4	255.5	238.2	220.9	210.9	200.9	196.2	191.6	184.3	177.0
72.5°	247.5	228.8	210.2	196.9	183.6	175.0	166.3	157.0	147.7	141.0	134.4
75°	204.9	186.3	167.6	155.0	142.4	132.4	122.4	119.1	115.8	113.8	111.8
77.5°	157.0	141.0	125.1	115.1	105.1	100.5	95.8	93.8	91.8	91.1	90.5
80°	113.1	99.8	86.5	81.2	75.8	74.5	73.2	71.8	70.5	69.8	69.2
82.5°	70.5	63.9	57.2	55.9	54.5	53.9	53.2	52.6	51.9	51.2	50.6
85°	41.2	38.6	35.9	35.3	34.6	33.9	33.3	33.3	33.3	33.3	33.3
87.5°	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	16.6	16.0
90°	6.3	7.4	9.1	10.8	12.5	14.3	13.7	14.3	14.8	15.4	16.5
92.5°	29.1	39.4	57.6	87.8	117.5	106.1	79.3	56.5	43.9	38.2	34.2
95°	51.9	74.1	122.6	207.6	301.2	338.2	274.3	205.3	139.2	108.9	88.4
97.5°	59.9	84.4	132.3	231.0	388.4	520.2	537.9	471.7	355.9	280.6	215.6
100°	68.4	90.7	130.6	215.0	365.0	540.1	652.5	672.5	626.3	559.5	478.5
102.5°	78.1	98.1	132.9	201.3	330.8	503.1	658.2	739.2	748.9	717.0	673.0
105°	89.0	106.7	137.5	196.2	304.0	458.6	622.3	741.5	798.5	809.4	794.5
107.5°	101.0	117.5	144.9	195.1	284.6	419.2	570.9	707.3	796.8	841.3	856.7
110°	112.9	128.9	154.6	197.9	274.3	386.7	523.0	653.6	758.6	830.5	870.4



TEST NUMBER: P831851

CATALOG NUMBER: S123RDIP-S1000D585U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	125.5	140.9	164.3	203.6	268.6	365.0	481.4	600.6	708.4	791.1	845.3
115°	138.0	153.4	175.1	209.9	268.1	350.8	449.5	555.0	654.2	738.1	800.2
117.5°	150.6	164.8	186.5	217.9	268.6	341.1	428.4	519.6	607.4	684.4	748.9
120°	162.6	176.8	197.3	227.0	270.9	334.8	412.4	492.8	569.8	638.2	695.9
122.5°	173.4	188.8	208.8	235.6	274.9	330.8	399.3	471.7	539.6	601.7	654.2
125°	184.2	199.6	219.6	244.7	278.9	327.4	388.4	453.4	515.6	570.4	616.0
127.5°	194.5	209.9	229.3	252.1	283.5	325.7	378.2	436.9	493.4	543.6	585.8
130°	203.6	219.0	237.8	259.5	288.0	324.0	370.2	421.5	472.8	519.0	557.8
132.5°	212.2	227.0	245.3	266.4	291.5	323.4	362.8	407.2	453.4	495.7	532.2
135°	219.6	235.0	252.7	272.1	294.9	322.8	356.5	394.7	435.2	472.3	504.8
137.5°	226.4	240.7	257.8	276.6	297.2	321.7	350.8	382.7	416.9	450.0	479.1
140°	232.1	246.4	262.9	280.1	299.4	321.1	345.6	372.5	401.5	428.9	453.4
142.5°	237.8	251.0	266.9	283.5	301.2	320.0	341.1	362.8	386.7	409.5	430.1
145°	242.4	255.5	270.4	285.8	301.7	318.8	337.1	355.3	374.2	392.4	409.0
147.5°	248.1	259.5	273.2	287.5	301.7	317.1	333.1	349.1	364.5	379.9	391.8
150°	252.7	262.9	276.1	288.0	301.7	314.8	329.1	342.2	355.3	367.3	378.2
152.5°	257.2	266.9	277.8	289.2	300.0	312.0	324.5	336.0	346.8	357.1	365.6
155°	262.4	270.4	280.1	289.2	298.9	308.6	320.0	329.7	338.8	347.4	354.2
157.5°	266.9	273.2	281.2	289.8	297.2	305.7	314.8	322.8	330.8	337.7	343.4
160°	270.4	276.1	282.9	289.8	296.0	302.3	309.7	317.1	323.4	329.1	333.1
162.5°	273.2	277.8	283.5	289.2	293.7	298.9	304.6	310.3	315.4	320.6	324.0
165°	275.5	279.5	284.0	288.0	291.5	295.5	300.0	304.6	308.0	312.0	314.8
167.5°	277.8	280.6	284.0	287.5	289.2	292.0	295.5	299.4	302.3	304.6	306.9
170°	279.5	280.6	283.5	285.8	286.9	288.6	291.5	294.3	296.0	298.3	299.4
172.5°	280.6	281.2	283.5	285.2	285.2	285.8	287.5	289.8	290.9	292.6	293.2
175°	281.2	281.8	282.9	284.0	283.5	283.5	284.6	285.8	286.3	287.5	287.5
177.5°	281.8	281.8	282.3	283.5	282.3	281.8	282.3	282.9	283.5	284.0	284.0
180°	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8



TEST NUMBER: P831851

CATALOG NUMBER: S123RDIP-S1000D585U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	3245.0	3245.0	3245.0	3245.0
2.5°	2883.1	2876.5	2873.8	2871.2
5°	2471.4	2450.7	2446.1	2441.4
7.5°	2121.4	2112.8	2084.2	2055.6
10°	1837.4	1810.8	1798.8	1786.8
12.5°	1599.9	1575.3	1571.3	1567.3
15°	1415.6	1398.3	1392.3	1386.4
17.5°	1294.5	1282.6	1275.3	1267.9
20°	1204.7	1196.1	1190.8	1185.5
22.5°	1136.2	1129.6	1125.6	1121.6
25°	1070.4	1060.4	1057.1	1053.7
27.5°	1007.8	999.2	995.9	992.5
30°	949.3	942.0	937.3	932.7
32.5°	885.4	876.8	874.1	871.5
35°	828.9	823.6	820.9	818.2
37.5°	769.0	762.4	758.4	754.4
40°	717.8	714.5	712.5	710.5
42.5°	665.9	659.9	659.2	658.6
45°	614.0	608.0	606.7	605.4
47.5°	565.5	560.1	559.5	558.8
50°	511.6	504.2	498.9	493.6
52.5°	449.7	443.0	438.4	433.7
55°	393.2	385.8	381.8	377.9
57.5°	350.6	347.3	345.3	343.3
60°	316.0	314.0	312.7	311.3
62.5°	284.1	282.1	282.1	282.1
65°	254.8	252.8	250.8	248.8
67.5°	216.9	212.9	212.2	211.5
70°	171.0	165.0	164.3	163.6
72.5°	133.7	133.0	131.7	130.4
75°	110.4	109.1	109.1	109.1
77.5°	89.1	87.8	87.8	87.8
80°	68.5	67.9	68.5	69.2
82.5°	50.6	50.6	49.9	49.2
85°	32.6	31.9	31.9	31.9
87.5°	16.0	16.0	16.0	16.0
90°	16.0	16.5	17.1	16.5
92.5°	33.1	30.8	31.4	30.2
95°	77.6	72.4	68.4	66.2
97.5°	177.4	155.7	142.0	135.7
100°	420.9	379.3	357.1	357.6
102.5°	631.4	600.6	582.9	566.4
105°	768.3	746.6	728.4	725.5
107.5°	853.3	843.0	835.6	829.3
110°	886.4	890.9	889.8	888.6



TEST NUMBER: P831851

CATALOG NUMBER: S123RDIP-S1000D585U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	877.8	894.3	900.1	900.6
115°	843.0	868.1	879.5	882.4
117.5°	793.4	821.3	838.4	842.4
120°	740.9	772.9	786.5	790.0
122.5°	693.0	721.0	736.4	740.9
125°	652.5	677.6	691.9	695.9
127.5°	618.9	640.5	653.6	657.1
130°	588.1	608.6	620.6	625.1
132.5°	560.1	580.6	590.9	593.8
135°	532.7	549.8	560.1	564.1
137.5°	503.1	520.8	529.3	532.7
140°	475.1	491.1	500.2	499.6
142.5°	447.7	461.4	469.4	468.8
145°	423.2	435.2	439.8	440.9
147.5°	403.3	411.8	416.4	416.9
150°	386.7	393.0	396.4	396.4
152.5°	371.9	377.6	379.3	379.3
155°	359.3	363.9	365.0	365.6
157.5°	347.9	351.4	352.5	352.5
160°	337.1	340.5	340.5	339.9
162.5°	326.3	329.1	329.1	328.5
165°	317.1	319.4	318.8	318.8
167.5°	308.0	309.7	309.1	309.1
170°	300.0	301.2	300.6	300.6
172.5°	293.2	294.3	293.2	292.6
175°	287.5	288.0	287.5	286.9
177.5°	283.5	284.0	282.9	282.9
180°	281.8	281.8	281.8	281.8



TEST NUMBER: P831851

CATALOG NUMBER: S123RDIP-S1000D585U835-4F0-1E-UDD-G4

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	14.56	15.52	15.37	16.34	17.35	19.23	20.18	20.04	21.01	22.02
	3H	15.79	16.65	16.62	17.48	18.52	20.74	21.59	21.56	22.42	23.46
	4H	16.18	16.99	17.02	17.83	18.88	21.23	22.04	22.07	22.88	23.93
	6H	16.47	17.21	17.32	18.06	19.12	21.55	22.29	22.40	23.14	24.20
	8H	16.56	17.26	17.42	18.13	19.19	21.63	22.34	22.49	23.20	24.26
	12H	16.61	17.29	17.48	18.14	19.23	21.67	22.34	22.53	23.20	24.28
4H	2H	15.30	16.11	16.14	16.95	18.00	19.24	20.04	20.08	20.88	21.93
	3H	16.68	17.35	17.53	18.22	19.29	20.91	21.57	21.76	22.45	23.51
	4H	17.14	17.75	18.01	18.62	19.71	21.52	22.12	22.38	22.99	24.09
	6H	17.51	18.04	18.40	18.93	20.03	21.96	22.48	22.84	23.38	24.48
	8H	17.64	18.13	18.53	19.02	20.13	22.09	22.58	22.98	23.47	24.58
	12H	17.72	18.16	18.63	19.07	20.18	22.16	22.60	23.07	23.51	24.62
8H	4H	17.46	17.95	18.35	18.84	19.95	21.49	21.98	22.38	22.87	23.98
	6H	17.93	18.33	18.84	19.26	20.37	21.99	22.39	22.90	23.33	24.44
	8H	18.13	18.48	19.05	19.40	20.53	22.18	22.53	23.10	23.46	24.59
	12H	18.27	18.58	19.19	19.50	20.68	22.30	22.61	23.22	23.53	24.71
12H	4H	17.48	17.92	18.38	18.83	19.94	21.45	21.89	22.35	22.79	23.91
	6H	17.99	18.35	18.91	19.27	20.40	21.97	22.32	22.89	23.25	24.37
	8H	18.21	18.53	19.14	19.44	20.62	22.17	22.48	23.09	23.39	24.57