

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: P831866

Luminaire Tested: S123RDIP-S1000D585U935-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831866
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-S1000D585U935-4F0-1E-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

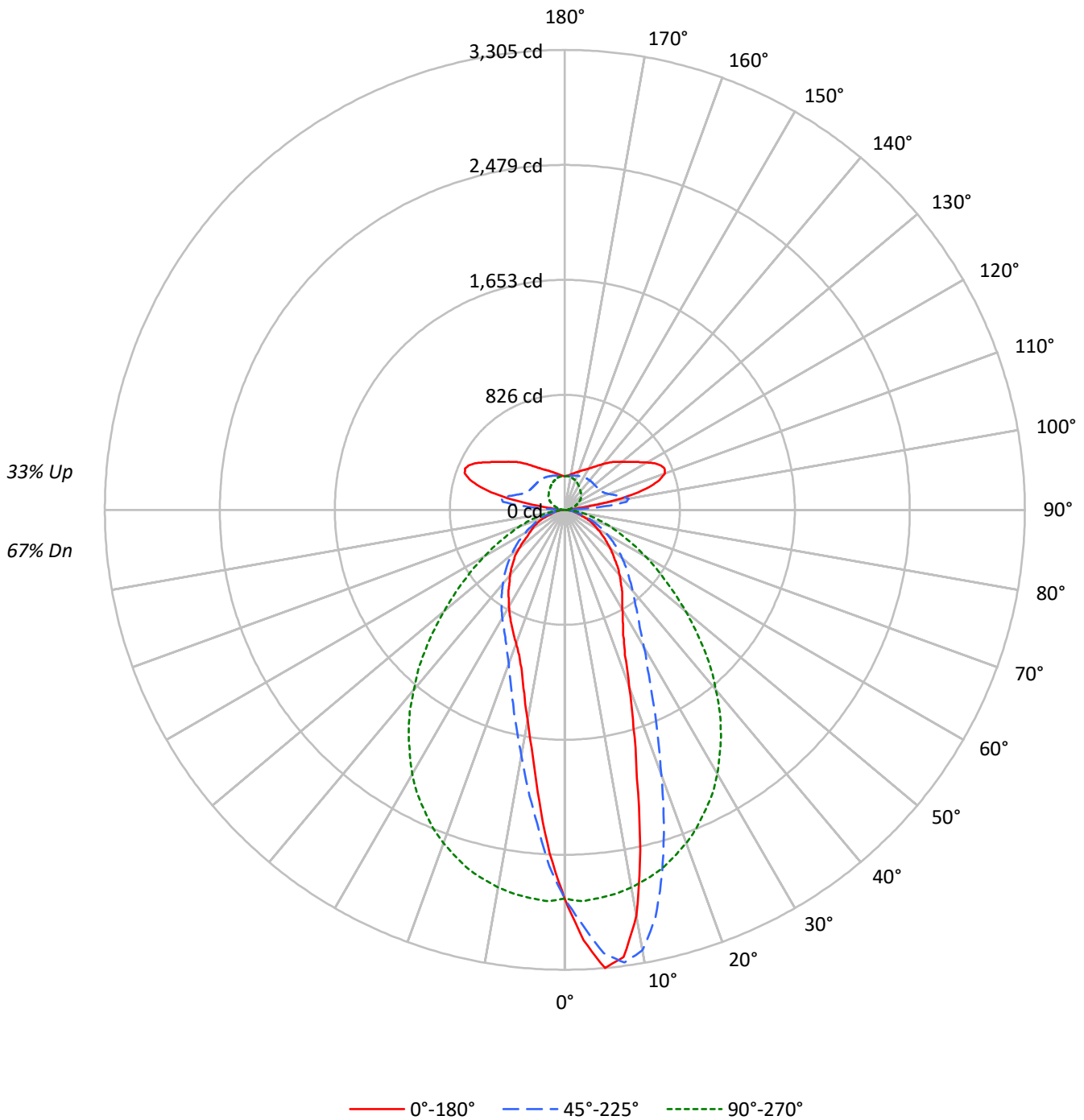
Lumens per Lamp: N/A
Luminaire Lumens: 5530.6 lumens
Efficiency: N/A
Efficacy: 110.0 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Direct

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

TEST NUMBER: P831866

CATALOG NUMBER: S123RDIP-S1000D585U935-4F0-1E-UDD-G4

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	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°	30074	30074	30074	30074	30074
5°	35710	34571	30263	24464	22713
10°	32354	35114	30112	19601	16816
15°	22276	30107	29795	16020	13301
20°	15497	23180	29196	13509	11692
25°	11809	17667	28326	12006	10776
30°	10280	14124	27237	11149	9981
35°	9437	11914	25695	10424	9257
40°	8612	10640	23678	9714	8595
45°	7777	9730	21500	9042	7934
50°	7060	8977	18933	8383	7117
55°	6384	8244	16467	7739	6105
60°	5722	7496	14303	7029	5772
65°	5280	6653	12312	6316	5456
70°	4290	5750	10744	5715	4434
75°	3764	4575	9100	4741	3905
80°	3409	3868	7457	3973	3694
85°	3112	3396	5656	3606	3396

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 22686 cd/sqm



TEST NUMBER: P831866

CATALOG NUMBER: S123RDIP-S1000D585U935-4F0-1E-UDD-G4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	254.7	4.6
10°-20°	589.3	10.7
20°-30°	676.1	12.2
30°-40°	666.4	12.1
40°-50°	587.7	10.6
50°-60°	452.1	8.2
60°-70°	297.3	5.4
70°-80°	144.4	2.6
80°-90°	37.7	0.7
90°-100°	131.6	2.4
100°-110°	385.4	7.0
110°-120°	376.4	6.8
120°-130°	299.7	5.4
130°-140°	236.5	4.3
140°-150°	176.4	3.2
150°-160°	123.0	2.2
160°-170°	72.3	1.3
170°-180°	23.5	0.4
0°-30°	1520.1	27.5
0°-40°	2186.5	39.5
0°-60°	3226.4	58.3
0°-90°	3705.7	67.0
90°-120°	893.4	16.2
90°-150°	1606.1	29.0
90°-180°	1825.0	33.0
0°-180°	5530.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2794	2794	2794	2794	2794	
5°	3305	3200	2801	2264	2102	302
15°	1999	2702	2674	1438	1194	564
25°	994	1488	2385	1011	907	470
35°	718	907	1955	793	704	448
45°	511	639	1412	594	521	397
55°	340	439	878	412	325	305
65°	207	261	483	248	214	203
75°	90	110	219	114	94	97
85°	25	28	46	29	28	27
90°	14	12	1	12	14	9
95°	57	291	17	291	57	93
105°	625	395	57	395	625	623
115°	760	302	101	302	760	741
125°	599	282	140	282	599	542
135°	486	278	164	278	486	377
145°	380	274	187	274	380	241
155°	315	266	213	266	315	147
165°	274	254	232	254	274	78
175°	247	244	242	244	247	24
180°	243	243	243	243	243	



TEST NUMBER: P831866

CATALOG NUMBER: S123RDIP-S1000D585U935-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0
2.5°	3096.4	3086.6	3076.9	3074.0	3071.2	3062.0	3052.8	3032.2	3011.6	2990.4	2969.2
5°	3304.9	3306.0	3307.2	3304.3	3301.4	3289.4	3277.4	3252.2	3227.0	3199.5	3172.0
7.5°	3240.7	3259.0	3277.4	3280.8	3284.2	3293.4	3302.6	3296.8	3291.1	3280.8	3270.5
10°	2960.1	2958.9	2957.8	2978.4	2999.0	3060.3	3121.6	3153.1	3184.6	3212.6	3240.7
12.5°	2501.8	2503.6	2505.3	2572.9	2640.5	2698.3	2756.2	2836.3	2916.5	3003.0	3089.5
15°	1999.0	2027.0	2055.1	2115.2	2175.4	2262.4	2349.5	2457.2	2564.8	2701.7	2838.6
17.5°	1641.5	1653.6	1665.6	1723.5	1781.3	1863.8	1946.3	2068.3	2190.3	2366.7	2543.1
20°	1352.9	1363.8	1374.6	1416.5	1458.3	1537.3	1616.3	1732.6	1848.9	2023.6	2198.3
22.5°	1129.5	1150.7	1171.9	1199.9	1228.0	1285.3	1342.6	1461.1	1579.7	1738.9	1898.1
25°	994.3	1004.1	1013.8	1037.9	1061.9	1116.9	1171.9	1250.3	1328.8	1487.5	1646.1
27.5°	902.7	905.5	908.4	926.2	943.9	979.4	1014.9	1087.7	1160.4	1291.0	1421.6
30°	827.1	832.2	837.4	851.1	864.9	890.7	916.4	968.0	1019.5	1136.4	1253.2
32.5°	768.7	771.5	774.4	785.8	797.3	816.2	835.1	875.8	916.4	1005.8	1095.1
35°	718.2	718.8	719.4	728.0	736.6	754.9	773.2	807.0	840.8	906.7	972.6
37.5°	661.0	665.0	669.0	675.3	681.6	697.6	713.7	741.2	768.7	823.1	877.5
40°	612.9	616.3	619.7	627.2	634.6	647.2	659.8	685.0	710.2	757.2	804.2
42.5°	564.7	567.0	569.3	576.8	584.2	599.7	615.2	635.2	655.2	694.2	733.1
45°	510.9	516.6	522.4	530.4	538.4	551.6	564.7	585.4	606.0	639.2	672.4
47.5°	466.2	469.1	472.0	478.8	485.7	501.7	517.8	536.1	554.4	585.4	616.3
50°	421.6	422.7	423.8	430.1	436.4	450.8	465.1	486.3	507.5	536.1	564.7
52.5°	379.2	382.0	384.9	391.2	397.5	407.2	417.0	438.7	460.5	488.6	516.6
55°	340.2	341.9	343.7	348.2	352.8	364.3	375.7	394.6	413.5	439.3	465.1
57.5°	303.6	305.9	308.1	311.6	315.0	325.3	335.6	352.3	368.9	394.6	420.4
60°	265.8	268.6	271.5	275.5	279.5	287.5	295.5	310.4	325.3	348.2	371.2
62.5°	238.3	238.8	239.4	242.9	246.3	252.0	257.7	269.8	281.8	304.7	327.6
65°	207.3	209.1	210.8	212.5	214.2	218.8	223.4	233.7	244.0	261.2	278.4
67.5°	175.3	177.0	178.7	181.6	184.4	188.4	192.4	199.3	206.2	222.2	238.3
70°	136.3	136.3	136.3	140.9	145.5	152.4	159.2	164.4	169.5	182.7	195.9
72.5°	111.1	111.7	112.3	112.8	113.4	117.4	121.4	130.0	138.6	146.6	154.6
75°	90.5	91.1	91.6	92.2	92.8	93.9	95.1	97.9	100.8	110.0	119.1
77.5°	72.2	72.7	73.3	73.9	74.5	75.6	76.8	77.9	79.0	82.5	85.9
80°	55.0	55.6	56.1	56.7	57.3	57.8	58.4	59.6	60.7	62.4	64.1
82.5°	40.1	40.1	40.1	40.1	40.1	41.2	42.4	42.4	42.4	43.5	44.7
85°	25.2	25.2	25.2	25.8	26.3	26.3	26.3	26.9	27.5	27.5	27.5
87.5°	11.5	10.9	10.3	10.9	11.5	11.5	11.5	12.0	12.6	12.6	12.6
90°	14.2	14.7	14.2	13.8	14.2	13.3	12.8	12.3	11.8	12.3	10.8
92.5°	26.0	27.0	26.5	28.5	29.5	32.9	37.8	48.6	68.3	91.3	101.2
95°	57.0	58.9	62.4	66.8	76.1	93.8	119.8	176.8	236.2	291.2	259.3
97.5°	116.9	122.3	134.1	152.7	185.6	241.6	306.4	406.1	463.1	447.9	334.4
100°	307.9	307.4	326.6	362.4	412.0	481.8	539.2	579.0	561.8	465.1	314.3
102.5°	487.7	501.9	517.1	543.6	579.5	617.3	644.8	636.5	566.7	433.1	284.8
105°	624.7	627.1	642.8	661.5	684.1	696.9	687.5	638.4	535.8	394.8	261.8
107.5°	714.0	719.4	725.8	734.7	737.6	724.4	686.1	609.0	491.6	361.0	245.1
110°	765.1	766.1	767.1	763.2	749.4	715.0	653.2	562.8	450.3	333.0	236.2



TEST NUMBER: P831866

CATALOG NUMBER: S123RDIP-S1000D585U935-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	775.4	774.9	770.0	755.8	727.8	681.1	609.9	517.1	414.5	314.3	231.3
115°	759.7	757.3	747.4	725.8	689.0	635.5	563.3	477.8	387.0	302.0	230.8
117.5°	725.3	721.9	707.2	683.1	644.8	589.3	523.0	447.4	368.8	293.7	231.3
120°	680.2	677.2	665.4	637.9	599.1	549.5	490.6	424.3	355.1	288.3	233.3
122.5°	637.9	634.0	620.7	596.7	563.3	518.1	464.6	406.1	343.8	284.8	236.7
125°	599.1	595.7	583.4	561.8	530.4	491.1	443.9	390.4	334.4	281.9	240.1
127.5°	565.7	562.8	551.5	532.8	504.4	468.0	424.8	376.2	325.6	280.4	244.1
130°	538.2	534.3	524.0	506.3	480.3	446.9	407.1	362.9	318.7	278.9	248.0
132.5°	511.2	508.8	499.9	482.3	458.2	426.8	390.4	350.6	312.3	278.4	250.9
135°	485.7	482.3	473.4	458.7	434.6	406.6	374.7	339.8	306.9	278.0	253.9
137.5°	458.7	455.7	448.4	433.1	412.5	387.5	359.0	329.5	302.0	277.0	255.9
140°	430.2	430.7	422.8	409.1	390.4	369.3	345.7	320.7	297.6	276.5	257.8
142.5°	403.7	404.2	397.3	385.5	370.3	352.6	333.0	312.3	293.7	275.5	259.3
145°	379.6	378.6	374.7	364.4	352.1	337.9	322.2	305.9	290.2	274.5	259.8
147.5°	359.0	358.5	354.6	347.2	337.4	327.1	313.8	300.5	286.8	273.0	259.8
150°	341.3	341.3	338.4	333.0	325.6	316.3	305.9	294.7	283.4	271.1	259.8
152.5°	326.6	326.6	325.1	320.2	314.8	307.4	298.6	289.3	279.4	268.6	258.3
155°	314.8	314.3	313.3	309.4	305.0	299.1	291.7	283.9	275.5	265.7	257.3
157.5°	303.5	303.5	302.5	299.6	295.6	290.7	284.8	278.0	271.1	263.2	255.9
160°	292.7	293.2	293.2	290.2	286.8	283.4	278.4	273.0	266.7	260.3	254.9
162.5°	282.9	283.4	283.4	280.9	278.9	276.0	271.6	267.2	262.2	257.3	252.9
165°	274.5	274.5	275.0	273.0	271.1	268.6	265.2	262.2	258.3	254.4	250.9
167.5°	266.2	266.2	266.7	265.2	264.2	262.2	260.3	257.8	254.4	251.4	249.0
170°	258.8	258.8	259.3	258.3	257.8	256.8	254.9	253.4	250.9	248.5	247.0
172.5°	251.9	252.4	253.4	252.4	252.4	251.9	250.5	249.5	247.5	246.0	245.5
175°	247.0	247.5	248.0	247.5	247.5	247.5	246.5	246.0	245.1	244.1	244.1
177.5°	243.6	243.6	244.6	244.1	244.6	244.6	244.1	243.6	243.1	242.6	243.1
180°	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6



TEST NUMBER: P831866

CATALOG NUMBER: S123RDIP-S1000D585U935-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0
2.5°	2966.4	2963.5	2936.0	2908.5	2881.6	2854.7	2834.6	2814.6	2780.8	2747.0	2725.8
5°	3150.2	3128.5	3084.9	3041.4	2976.1	2910.8	2855.8	2800.8	2731.0	2661.1	2602.7
7.5°	3252.7	3235.0	3182.3	3129.6	3043.1	2956.6	2870.7	2784.8	2681.7	2578.6	2490.4
10°	3255.6	3270.5	3227.0	3183.4	3086.1	2988.7	2871.9	2755.0	2616.4	2477.8	2363.8
12.5°	3153.7	3217.8	3208.6	3199.5	3100.4	3001.3	2859.3	2717.2	2547.1	2377.0	2234.4
15°	2962.9	3087.2	3123.9	3160.5	3078.6	2996.7	2835.2	2673.7	2473.8	2273.9	2110.1
17.5°	2717.2	2891.3	2988.1	3084.9	3025.4	2965.8	2788.8	2611.8	2386.7	2161.6	1983.5
20°	2426.2	2654.2	2806.0	2957.8	2936.0	2914.2	2731.5	2548.8	2306.0	2063.1	1870.1
22.5°	2138.7	2379.3	2588.9	2798.5	2820.9	2843.2	2658.8	2474.4	2208.6	1942.8	1746.4
25°	1890.7	2135.3	2385.0	2634.7	2685.1	2735.5	2560.3	2385.0	2109.5	1834.0	1638.7
27.5°	1654.2	1886.7	2161.6	2436.5	2528.2	2619.8	2459.5	2299.1	2012.1	1725.2	1530.4
30°	1461.1	1669.0	1949.7	2230.4	2358.1	2485.8	2338.6	2191.4	1906.7	1622.1	1431.3
32.5°	1281.3	1467.4	1749.2	2031.0	2179.4	2327.7	2200.6	2073.4	1799.6	1525.9	1337.4
35°	1139.2	1305.9	1568.8	1831.7	1997.8	2163.9	2059.7	1955.4	1687.9	1420.5	1242.3
37.5°	1017.2	1157.0	1403.9	1650.7	1827.1	2003.5	1916.5	1829.4	1578.0	1326.5	1158.1
40°	916.4	1028.7	1258.4	1488.0	1661.0	1834.0	1759.5	1685.1	1460.0	1234.9	1077.4
42.5°	829.9	926.7	1132.9	1339.1	1497.8	1656.4	1607.2	1557.9	1354.0	1150.1	1004.1
45°	753.8	835.1	1016.7	1198.2	1344.3	1490.3	1451.4	1412.4	1236.6	1060.8	926.7
47.5°	686.2	756.1	918.1	1080.2	1211.4	1342.6	1306.5	1270.4	1124.9	979.4	857.4
50°	624.3	683.9	819.1	954.2	1072.2	1190.2	1160.4	1130.6	1010.4	890.1	784.7
52.5°	565.9	615.2	736.6	858.0	953.1	1048.2	1025.3	1002.3	909.6	816.8	721.1
55°	510.3	555.6	658.1	760.6	842.0	923.3	900.4	877.5	805.3	733.1	648.9
57.5°	459.9	499.5	582.5	665.6	730.3	795.0	784.1	773.2	713.1	653.0	583.6
60°	406.7	442.2	513.8	585.4	637.5	689.6	677.0	664.4	621.5	578.5	518.9
62.5°	359.1	390.6	447.9	505.2	547.6	589.9	580.8	571.6	539.0	506.3	457.1
65°	309.3	340.2	386.6	433.0	466.2	499.5	491.4	483.4	458.8	434.2	394.6
67.5°	264.0	289.8	329.9	370.0	392.3	414.7	410.1	405.5	386.6	367.7	336.8
70°	218.2	240.6	273.8	307.0	322.5	337.9	339.7	341.4	324.2	307.0	284.1
72.5°	172.4	190.2	221.1	252.0	264.0	276.1	275.5	274.9	264.6	254.3	233.7
75°	132.3	145.5	169.5	193.6	203.9	214.2	216.5	218.8	209.1	199.3	187.9
77.5°	95.1	104.2	122.6	140.9	152.4	163.8	165.0	166.1	161.5	156.9	146.1
80°	67.0	69.9	81.3	92.8	104.8	116.8	118.6	120.3	115.7	111.1	104.2
82.5°	46.4	48.1	52.1	56.1	65.9	75.6	77.9	80.2	77.9	75.6	68.2
85°	28.1	28.6	30.4	32.1	36.7	41.2	43.5	45.8	44.7	43.5	39.5
87.5°	12.6	12.6	13.2	13.7	14.9	16.0	18.9	21.8	20.0	18.3	16.6
90°	9.3	7.9	6.4	5.4	4.4	2.9	2.0	1.0	2.0	2.9	4.4
92.5°	75.6	49.6	33.9	25.0	20.1	15.7	10.8	7.4	10.8	15.7	20.1
95°	178.8	105.6	63.8	44.7	31.9	23.6	18.2	16.7	18.2	23.6	31.9
97.5°	198.9	113.9	72.7	51.6	38.8	31.4	27.0	26.5	27.0	31.4	38.8
100°	185.1	112.5	78.1	58.9	47.1	40.3	36.8	36.3	36.8	40.3	47.1
102.5°	173.4	114.4	84.5	67.3	57.0	50.6	47.6	46.7	47.6	50.6	57.0
105°	168.9	118.4	91.8	76.6	67.3	61.4	58.4	57.0	58.4	61.4	67.3
107.5°	168.0	124.7	101.2	86.9	78.1	72.2	69.2	67.8	69.2	72.2	78.1
110°	170.4	133.1	111.0	97.2	88.9	83.5	81.0	79.6	81.0	83.5	88.9



TEST NUMBER: P831866

CATALOG NUMBER: S123RDIP-S1000D585U935-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	175.3	141.4	121.3	108.0	99.7	94.3	91.8	90.4	91.8	94.3	99.7
115°	180.7	150.8	132.1	118.8	110.5	105.6	102.6	100.7	102.6	105.6	110.5
117.5°	187.6	160.6	141.9	129.6	120.3	115.9	113.4	111.0	113.4	115.9	120.3
120°	195.5	169.9	152.2	140.0	130.6	125.7	123.3	121.8	123.3	125.7	130.6
122.5°	202.8	179.7	162.6	149.3	140.5	135.0	132.6	131.1	132.6	135.0	140.5
125°	210.7	189.1	171.9	158.6	149.3	143.9	140.9	140.0	140.9	143.9	149.3
127.5°	217.1	197.4	180.7	167.5	157.1	151.7	148.3	146.8	148.3	151.7	157.1
130°	223.4	204.8	188.6	175.3	165.0	159.1	154.7	153.2	154.7	159.1	165.0
132.5°	229.3	211.2	195.5	182.7	172.4	165.0	160.1	158.1	160.1	165.0	172.4
135°	234.3	217.6	202.3	189.1	178.8	171.4	166.0	164.0	166.0	171.4	178.8
137.5°	238.2	222.0	207.2	195.0	184.7	176.8	171.4	169.4	171.4	176.8	184.7
140°	241.1	226.4	212.2	199.9	190.1	182.2	177.3	174.8	177.3	182.2	190.1
142.5°	244.1	229.8	216.1	204.8	195.0	188.1	182.7	180.7	182.7	188.1	195.0
145°	246.0	232.8	220.0	208.7	200.4	193.0	188.6	187.1	188.6	193.0	200.4
147.5°	247.5	235.2	223.4	213.6	205.3	198.9	194.5	193.5	194.5	198.9	205.3
150°	248.0	237.7	226.4	217.6	210.7	204.3	200.4	199.9	200.4	204.3	210.7
152.5°	249.0	239.2	229.8	221.5	215.6	210.2	206.3	206.3	206.3	210.2	215.6
155°	249.0	241.1	232.8	225.9	220.5	215.6	212.6	212.6	212.6	215.6	220.5
157.5°	249.5	242.1	235.2	229.8	224.9	220.5	218.0	217.6	218.0	220.5	224.9
160°	249.5	243.6	237.7	232.8	229.3	225.4	223.4	223.4	223.4	225.4	229.3
162.5°	249.0	244.1	239.2	235.2	232.3	229.3	227.9	227.9	227.9	229.3	232.3
165°	248.0	244.6	240.6	237.2	235.2	232.8	231.8	232.3	231.8	232.8	235.2
167.5°	247.5	244.6	241.6	239.2	237.7	235.7	235.2	235.7	235.2	235.7	237.7
170°	246.0	244.1	241.6	240.6	239.7	238.2	237.7	238.7	237.7	238.2	239.7
172.5°	245.5	244.1	242.1	241.6	241.1	240.1	240.1	240.6	240.1	240.1	241.1
175°	244.6	243.6	242.6	242.1	242.1	241.1	241.6	242.1	241.6	241.1	242.1
177.5°	244.1	243.1	242.6	242.6	242.6	242.1	242.6	243.1	242.6	242.1	242.6
180°	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6



TEST NUMBER: P831866

CATALOG NUMBER: S123RDIP-S1000D585U935-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0
2.5°	2704.6	2672.0	2639.3	2615.8	2592.3	2563.1	2533.9	2532.8	2531.6	2509.9	2488.1
5°	2544.2	2487.5	2430.8	2375.3	2319.7	2264.1	2208.6	2196.0	2183.4	2164.5	2145.6
7.5°	2402.2	2311.7	2221.2	2150.2	2079.1	2023.6	1968.0	1930.2	1892.4	1863.2	1834.0
10°	2249.8	2137.6	2025.3	1939.4	1853.5	1793.3	1733.2	1689.7	1646.1	1625.5	1604.9
12.5°	2091.7	1969.7	1847.7	1763.5	1679.4	1607.2	1535.0	1495.5	1456.0	1427.3	1398.7
15°	1946.3	1815.1	1683.9	1594.6	1505.2	1437.6	1370.1	1330.5	1291.0	1262.4	1233.7
17.5°	1805.4	1673.1	1540.7	1450.2	1359.7	1298.5	1237.2	1198.8	1160.4	1142.7	1124.9
20°	1677.1	1543.6	1410.2	1324.8	1239.5	1179.3	1119.2	1098.6	1077.9	1061.3	1044.7
22.5°	1549.9	1421.6	1293.3	1211.4	1129.5	1086.0	1042.4	1025.8	1009.2	996.6	984.0
25°	1443.4	1315.6	1187.9	1116.3	1044.7	1010.9	977.1	966.3	955.4	942.8	930.2
27.5°	1335.7	1214.3	1092.8	1035.6	978.3	950.8	923.3	909.6	895.8	885.5	875.2
30°	1240.6	1128.4	1016.1	968.5	921.0	897.0	872.9	858.0	843.1	833.4	823.6
32.5°	1149.0	1049.3	949.6	909.0	868.3	844.8	821.3	807.0	792.7	781.3	769.8
35°	1064.2	977.7	891.2	854.0	816.8	793.3	769.8	755.5	741.2	729.7	718.2
37.5°	989.7	911.3	832.8	797.9	762.9	742.3	721.7	706.8	691.9	679.9	667.8
40°	919.9	850.6	781.3	747.5	713.7	691.3	669.0	655.8	642.6	631.8	620.9
42.5°	858.0	794.4	730.9	697.6	664.4	643.2	622.0	606.6	591.1	584.8	578.5
45°	792.7	736.6	680.4	648.4	616.3	594.0	571.6	558.4	545.3	539.5	533.8
47.5°	735.4	683.3	631.2	599.7	568.2	548.1	528.1	517.8	507.5	499.5	491.4
50°	679.3	628.9	578.5	548.1	517.8	500.6	483.4	470.8	458.2	452.5	446.8
52.5°	625.5	579.6	533.8	502.9	472.0	455.3	438.7	427.9	417.0	404.9	392.9
55°	564.7	524.7	484.6	457.1	429.6	412.4	395.2	382.6	370.0	357.4	344.8
57.5°	514.3	474.8	435.3	410.7	386.0	369.4	352.8	339.1	325.3	315.0	304.7
60°	459.4	425.0	390.6	366.6	342.5	326.5	310.4	297.3	284.1	278.9	273.8
62.5°	407.8	375.7	343.7	322.5	301.3	285.8	270.3	261.8	253.2	249.7	246.3
65°	355.1	327.6	300.1	280.7	261.2	248.0	234.8	230.8	226.8	224.0	221.1
67.5°	305.9	282.4	258.9	241.7	224.5	215.4	206.2	201.6	197.0	193.6	190.2
70°	261.2	240.6	219.9	205.1	190.2	181.6	173.0	169.0	165.0	158.7	152.4
72.5°	213.1	197.0	181.0	169.5	158.1	150.6	143.2	135.2	127.2	121.4	115.7
75°	176.4	160.4	144.3	133.5	122.6	114.0	105.4	102.5	99.7	97.9	96.2
77.5°	135.2	121.4	107.7	99.1	90.5	86.5	82.5	80.8	79.0	78.5	77.9
80°	97.4	85.9	74.5	69.9	65.3	64.1	63.0	61.9	60.7	60.1	59.6
82.5°	60.7	55.0	49.3	48.1	47.0	46.4	45.8	45.2	44.7	44.1	43.5
85°	35.5	33.2	30.9	30.4	29.8	29.2	28.6	28.6	28.6	28.6	28.6
87.5°	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.3	13.7
90°	5.4	6.4	7.9	9.3	10.8	12.3	11.8	12.3	12.8	13.3	14.2
92.5°	25.0	33.9	49.6	75.6	101.2	91.3	68.3	48.6	37.8	32.9	29.5
95°	44.7	63.8	105.6	178.8	259.3	291.2	236.2	176.8	119.8	93.8	76.1
97.5°	51.6	72.7	113.9	198.9	334.4	447.9	463.1	406.1	306.4	241.6	185.6
100°	58.9	78.1	112.5	185.1	314.3	465.1	561.8	579.0	539.2	481.8	412.0
102.5°	67.3	84.5	114.4	173.4	284.8	433.1	566.7	636.5	644.8	617.3	579.5
105°	76.6	91.8	118.4	168.9	261.8	394.8	535.8	638.4	687.5	696.9	684.1
107.5°	86.9	101.2	124.7	168.0	245.1	361.0	491.6	609.0	686.1	724.4	737.6
110°	97.2	111.0	133.1	170.4	236.2	333.0	450.3	562.8	653.2	715.0	749.4



TEST NUMBER: P831866

CATALOG NUMBER: S123RDIP-S1000D585U935-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	108.0	121.3	141.4	175.3	231.3	314.3	414.5	517.1	609.9	681.1	727.8
115°	118.8	132.1	150.8	180.7	230.8	302.0	387.0	477.8	563.3	635.5	689.0
117.5°	129.6	141.9	160.6	187.6	231.3	293.7	368.8	447.4	523.0	589.3	644.8
120°	140.0	152.2	169.9	195.5	233.3	288.3	355.1	424.3	490.6	549.5	599.1
122.5°	149.3	162.6	179.7	202.8	236.7	284.8	343.8	406.1	464.6	518.1	563.3
125°	158.6	171.9	189.1	210.7	240.1	281.9	334.4	390.4	443.9	491.1	530.4
127.5°	167.5	180.7	197.4	217.1	244.1	280.4	325.6	376.2	424.8	468.0	504.4
130°	175.3	188.6	204.8	223.4	248.0	278.9	318.7	362.9	407.1	446.9	480.3
132.5°	182.7	195.5	211.2	229.3	250.9	278.4	312.3	350.6	390.4	426.8	458.2
135°	189.1	202.3	217.6	234.3	253.9	278.0	306.9	339.8	374.7	406.6	434.6
137.5°	195.0	207.2	222.0	238.2	255.9	277.0	302.0	329.5	359.0	387.5	412.5
140°	199.9	212.2	226.4	241.1	257.8	276.5	297.6	320.7	345.7	369.3	390.4
142.5°	204.8	216.1	229.8	244.1	259.3	275.5	293.7	312.3	333.0	352.6	370.3
145°	208.7	220.0	232.8	246.0	259.8	274.5	290.2	305.9	322.2	337.9	352.1
147.5°	213.6	223.4	235.2	247.5	259.8	273.0	286.8	300.5	313.8	327.1	337.4
150°	217.6	226.4	237.7	248.0	259.8	271.1	283.4	294.7	305.9	316.3	325.6
152.5°	221.5	229.8	239.2	249.0	258.3	268.6	279.4	289.3	298.6	307.4	314.8
155°	225.9	232.8	241.1	249.0	257.3	265.7	275.5	283.9	291.7	299.1	305.0
157.5°	229.8	235.2	242.1	249.5	255.9	263.2	271.1	278.0	284.8	290.7	295.6
160°	232.8	237.7	243.6	249.5	254.9	260.3	266.7	273.0	278.4	283.4	286.8
162.5°	235.2	239.2	244.1	249.0	252.9	257.3	262.2	267.2	271.6	276.0	278.9
165°	237.2	240.6	244.6	248.0	250.9	254.4	258.3	262.2	265.2	268.6	271.1
167.5°	239.2	241.6	244.6	247.5	249.0	251.4	254.4	257.8	260.3	262.2	264.2
170°	240.6	241.6	244.1	246.0	247.0	248.5	250.9	253.4	254.9	256.8	257.8
172.5°	241.6	242.1	244.1	245.5	245.5	246.0	247.5	249.5	250.5	251.9	252.4
175°	242.1	242.6	243.6	244.6	244.1	244.1	245.1	246.0	246.5	247.5	247.5
177.5°	242.6	242.6	243.1	244.1	243.1	242.6	243.1	243.6	244.1	244.6	244.6
180°	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6



TEST NUMBER: P831866

CATALOG NUMBER: S123RDIP-S1000D585U935-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2794.0	2794.0	2794.0	2794.0
2.5°	2482.4	2476.6	2474.4	2472.1
5°	2127.8	2110.1	2106.1	2102.1
7.5°	1826.6	1819.1	1794.5	1769.8
10°	1582.0	1559.1	1548.8	1538.5
12.5°	1377.5	1356.3	1352.9	1349.4
15°	1218.8	1204.0	1198.8	1193.6
17.5°	1114.6	1104.3	1098.0	1091.7
20°	1037.3	1029.8	1025.3	1020.7
22.5°	978.3	972.6	969.1	965.7
25°	921.6	913.0	910.1	907.3
27.5°	867.7	860.3	857.4	854.6
30°	817.3	811.0	807.0	803.0
32.5°	762.4	754.9	752.6	750.3
35°	713.7	709.1	706.8	704.5
37.5°	662.1	656.4	653.0	649.5
40°	618.0	615.2	613.4	611.7
42.5°	573.3	568.2	567.6	567.0
45°	528.7	523.5	522.4	521.2
47.5°	486.9	482.3	481.7	481.1
50°	440.5	434.2	429.6	425.0
52.5°	387.2	381.5	377.5	373.4
55°	338.5	332.2	328.8	325.3
57.5°	301.8	299.0	297.3	295.5
60°	272.1	270.3	269.2	268.1
62.5°	244.6	242.9	242.9	242.9
65°	219.4	217.7	215.9	214.2
67.5°	186.7	183.3	182.7	182.1
70°	147.2	142.0	141.5	140.9
72.5°	115.1	114.6	113.4	112.3
75°	95.1	93.9	93.9	93.9
77.5°	76.8	75.6	75.6	75.6
80°	59.0	58.4	59.0	59.6
82.5°	43.5	43.5	43.0	42.4
85°	28.1	27.5	27.5	27.5
87.5°	13.7	13.7	13.7	13.7
90°	13.8	14.2	14.7	14.2
92.5°	28.5	26.5	27.0	26.0
95°	66.8	62.4	58.9	57.0
97.5°	152.7	134.1	122.3	116.9
100°	362.4	326.6	307.4	307.9
102.5°	543.6	517.1	501.9	487.7
105°	661.5	642.8	627.1	624.7
107.5°	734.7	725.8	719.4	714.0
110°	763.2	767.1	766.1	765.1



TEST NUMBER: P831866

CATALOG NUMBER: S123RDIP-S1000D585U935-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	755.8	770.0	774.9	775.4
115°	725.8	747.4	757.3	759.7
117.5°	683.1	707.2	721.9	725.3
120°	637.9	665.4	677.2	680.2
122.5°	596.7	620.7	634.0	637.9
125°	561.8	583.4	595.7	599.1
127.5°	532.8	551.5	562.8	565.7
130°	506.3	524.0	534.3	538.2
132.5°	482.3	499.9	508.8	511.2
135°	458.7	473.4	482.3	485.7
137.5°	433.1	448.4	455.7	458.7
140°	409.1	422.8	430.7	430.2
142.5°	385.5	397.3	404.2	403.7
145°	364.4	374.7	378.6	379.6
147.5°	347.2	354.6	358.5	359.0
150°	333.0	338.4	341.3	341.3
152.5°	320.2	325.1	326.6	326.6
155°	309.4	313.3	314.3	314.8
157.5°	299.6	302.5	303.5	303.5
160°	290.2	293.2	293.2	292.7
162.5°	280.9	283.4	283.4	282.9
165°	273.0	275.0	274.5	274.5
167.5°	265.2	266.7	266.2	266.2
170°	258.3	259.3	258.8	258.8
172.5°	252.4	253.4	252.4	251.9
175°	247.5	248.0	247.5	247.0
177.5°	244.1	244.6	243.6	243.6
180°	242.6	242.6	242.6	242.6



TEST NUMBER: P831866

CATALOG NUMBER: S123RDIP-S1000D585U935-4F0-1E-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	14.04	15.00	14.85	15.82	16.83	18.71	19.66	19.52	20.49	21.50
	3H	15.27	16.13	16.09	16.96	18.00	20.22	21.07	21.04	21.90	22.94
	4H	15.66	16.47	16.50	17.31	18.36	20.71	21.52	21.55	22.36	23.41
	6H	15.95	16.69	16.80	17.54	18.60	21.03	21.77	21.88	22.62	23.68
	8H	16.04	16.74	16.90	17.61	18.67	21.11	21.82	21.97	22.68	23.74
	12H	16.09	16.77	16.96	17.62	18.71	21.15	21.82	22.01	22.68	23.76
4H	2H	14.78	15.59	15.62	16.43	17.48	18.72	19.52	19.56	20.36	21.41
	3H	16.16	16.83	17.01	17.70	18.77	20.39	21.05	21.24	21.93	22.99
	4H	16.62	17.23	17.49	18.10	19.19	21.00	21.60	21.86	22.47	23.57
	6H	16.99	17.52	17.88	18.41	19.51	21.44	21.96	22.32	22.86	23.96
	8H	17.12	17.61	18.01	18.50	19.61	21.57	22.06	22.46	22.95	24.06
	12H	17.20	17.64	18.11	18.55	19.66	21.64	22.08	22.55	22.99	24.10
8H	4H	16.94	17.43	17.83	18.32	19.43	20.97	21.46	21.86	22.35	23.46
	6H	17.41	17.81	18.32	18.74	19.85	21.47	21.88	22.38	22.81	23.92
	8H	17.60	17.96	18.53	18.88	20.01	21.66	22.01	22.58	22.94	24.07
	12H	17.75	18.06	18.67	18.98	20.16	21.78	22.09	22.70	23.01	24.19
12H	4H	16.96	17.40	17.86	18.31	19.42	20.93	21.37	21.83	22.27	23.39
	6H	17.47	17.83	18.39	18.75	19.88	21.45	21.80	22.37	22.73	23.85
	8H	17.69	18.01	18.62	18.92	20.10	21.65	21.96	22.57	22.87	24.05