

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: P831996

Luminaire Tested: S123RDIP-S1165D585U930-4F0-1E-UDD-G

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831996
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-5)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDIP-S1165D585U930-4F0-1E-UDD-G
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 585 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: -

Summary

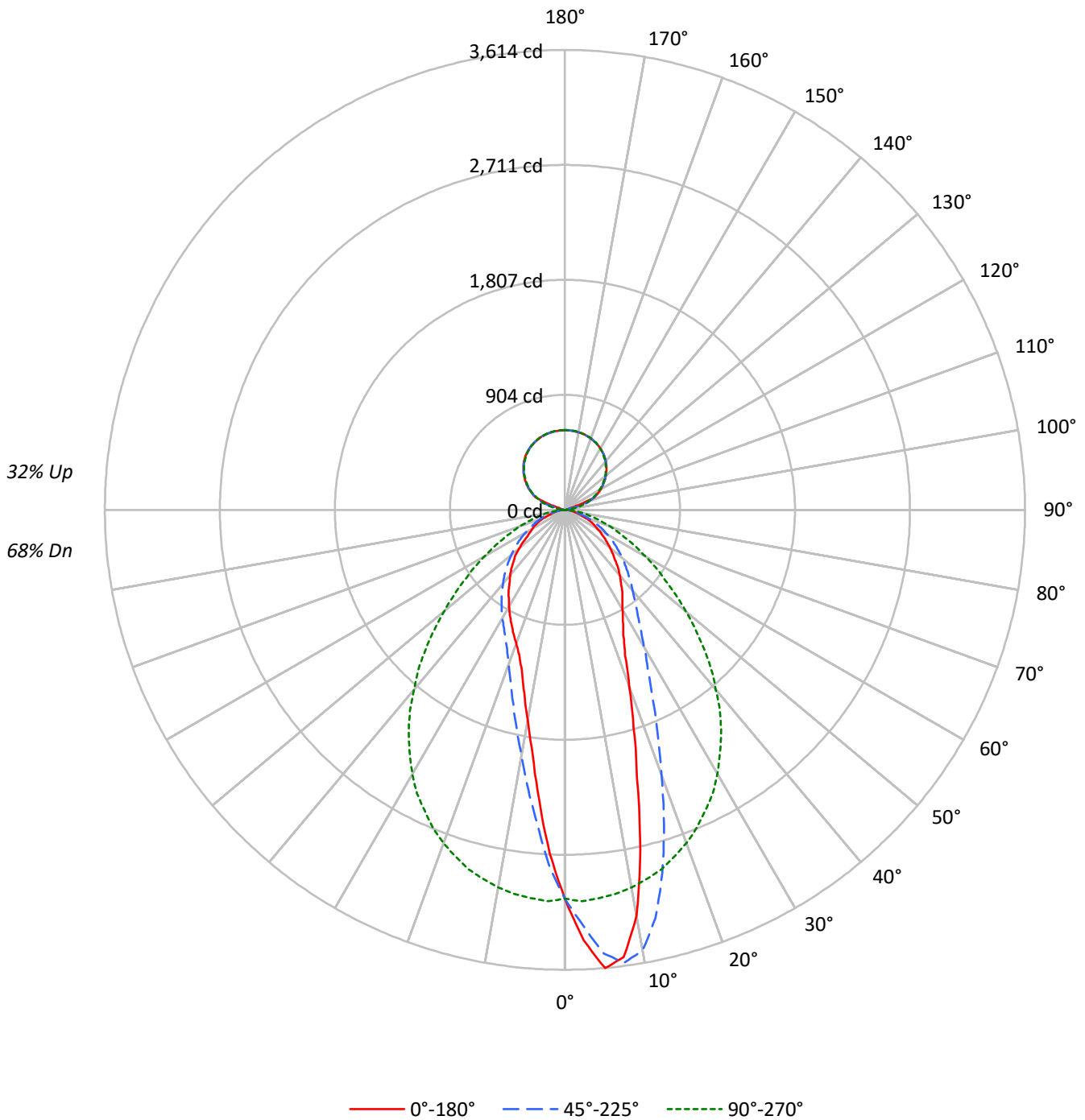
Lumens per Lamp: N/A
Luminaire Lumens: 5960.5 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 57.4
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									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	50	30	10	0																
RCR																																														
0	111	111	111	111	105	105	105	105	93	93	93	83	83	83	73	73	73	68																												
1	103	99	95	92	97	94	90	88	84	81	79	74	73	71	66	65	63	59																												
2	95	88	82	77	89	83	78	74	75	71	67	67	64	61	59	57	55	52																												
3	87	78	71	66	82	74	68	63	67	62	58	60	56	53	54	51	48	45																												
4	81	70	63	57	76	67	60	55	60	55	51	55	50	47	49	46	43	40																												
5	75	63	56	50	70	61	54	48	55	49	45	50	45	42	45	41	38	36																												
6	69	58	50	44	65	55	48	43	50	44	40	46	41	37	41	38	35	32																												
7	65	53	45	40	61	50	43	39	46	40	36	42	37	34	38	34	31	29																												
8	60	48	41	36	57	46	40	35	43	37	33	39	34	31	36	32	29	27																												
9	57	45	38	33	54	43	36	32	40	34	30	36	32	28	33	29	26	25																												
10	53	42	35	30	51	40	33	29	37	31	28	34	29	26	31	27	25	23																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	32890	32890	32890	32890	32890
5°	39053	37807	33097	26754	24840
10°	35382	38402	32932	21436	18390
15°	24361	32926	32584	17521	14547
20°	16947	25350	31930	14773	12786
25°	12915	19320	30978	13131	11784
30°	11242	15447	29788	12192	10915
35°	10322	13030	28101	11401	10125
40°	9417	11636	25895	10624	9400
45°	8505	10642	23514	9889	8677
50°	7720	9818	20706	9168	7783
55°	6983	9015	18008	8464	6677
60°	6256	8198	15642	7685	6312
65°	5777	7274	13466	6907	5968
70°	4692	6288	11748	6250	4850
75°	4117	5003	9952	5186	4271
80°	3725	4234	8151	4351	4035
85°	3409	3717	6187	3940	3717

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 24811 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	278.5	4.7
10°-20°	644.5	10.8
20°-30°	739.4	12.4
30°-40°	728.8	12.2
40°-50°	642.7	10.8
50°-60°	494.5	8.3
60°-70°	325.1	5.5
70°-80°	157.9	2.6
80°-90°	41.1	0.7
90°-100°	22.1	0.4
100°-110°	106.7	1.8
110°-120°	261.5	4.4
120°-130°	332.0	5.6
130°-140°	354.6	5.9
140°-150°	331.6	5.6
150°-160°	267.5	4.5
160°-170°	172.6	2.9
170°-180°	59.5	1.0
0°-30°	1662.4	27.9
0°-40°	2391.2	40.1
0°-60°	3528.4	59.2
0°-90°	4052.5	68.0
90°-120°	390.2	6.5
90°-150°	1408.4	23.6
90°-180°	1908.0	32.0
0°-180°	5960.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3056	3056	3056	3056	3056	
5°	3614	3499	3063	2476	2299	330
15°	2186	2955	2924	1572	1305	617
25°	1087	1627	2608	1106	992	514
35°	786	992	2138	868	770	490
45°	559	699	1545	650	570	434
55°	372	480	960	451	356	334
65°	227	286	529	271	234	222
75°	99	120	239	125	103	107
85°	28	30	50	32	30	29
90°	14	11	0	11	14	8
95°	18	14	28	14	18	15
105°	20	102	139	102	20	43
115°	273	267	260	267	273	257
125°	374	372	366	372	374	334
135°	461	461	456	461	461	355
145°	532	531	526	531	532	332
155°	579	579	580	579	579	267
165°	610	610	612	610	610	172
175°	624	624	626	624	624	59
180°	626	626	626	626	626	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6
2.5°	3386.3	3375.6	3365.0	3361.9	3358.7	3348.7	3338.7	3316.1	3293.6	3270.4	3247.2
5°	3614.3	3615.6	3616.8	3613.7	3610.5	3597.4	3584.2	3556.7	3529.1	3499.0	3469.0
7.5°	3544.1	3564.2	3584.2	3588.0	3591.8	3601.8	3611.8	3605.5	3599.3	3588.0	3576.7
10°	3237.2	3236.0	3234.7	3257.3	3279.8	3346.8	3413.9	3448.3	3482.8	3513.5	3544.1
12.5°	2736.1	2738.0	2739.9	2813.8	2887.7	2950.9	3014.2	3101.9	3189.6	3284.2	3378.8
15°	2186.1	2216.8	2247.5	2313.3	2379.1	2474.3	2569.5	2687.2	2805.0	2954.7	3104.4
17.5°	1795.2	1808.4	1821.6	1884.8	1948.1	2038.3	2128.5	2261.9	2395.3	2588.3	2781.2
20°	1479.5	1491.4	1503.3	1549.1	1594.8	1681.2	1767.7	1894.8	2022.0	2213.1	2404.1
22.5°	1235.3	1258.4	1281.6	1312.3	1343.0	1405.6	1468.3	1597.9	1727.6	1901.7	2075.9
25°	1087.4	1098.1	1108.7	1135.0	1161.3	1221.5	1281.6	1367.4	1453.2	1626.7	1800.3
27.5°	987.2	990.3	993.5	1012.9	1032.3	1071.1	1110.0	1189.5	1269.1	1411.9	1554.7
30°	904.5	910.2	915.8	930.8	945.9	974.0	1002.2	1058.6	1115.0	1242.8	1370.6
32.5°	840.6	843.8	846.9	859.4	871.9	892.6	913.3	957.8	1002.2	1100.0	1197.7
35°	785.5	786.1	786.8	796.1	805.5	825.6	845.6	882.6	919.5	991.6	1063.6
37.5°	722.9	727.2	731.6	738.5	745.4	762.9	780.5	810.6	840.6	900.1	959.6
40°	670.2	674.0	677.8	685.9	694.0	707.8	721.6	749.2	776.7	828.1	879.5
42.5°	617.6	620.1	622.6	630.8	638.9	655.8	672.7	694.7	716.6	759.2	801.8
45°	558.7	565.0	571.3	580.0	588.8	603.2	617.6	640.2	662.7	699.1	735.4
47.5°	509.9	513.0	516.1	523.7	531.2	548.7	566.3	586.3	606.4	640.2	674.0
50°	461.0	462.3	463.5	470.4	477.3	493.0	508.6	531.8	555.0	586.3	617.6
52.5°	414.7	417.8	420.9	427.8	434.7	445.4	456.0	479.8	503.6	534.3	565.0
55°	372.1	374.0	375.8	380.8	385.9	398.4	410.9	431.6	452.3	480.4	508.6
57.5°	332.0	334.5	337.0	340.8	344.5	355.8	367.1	385.2	403.4	431.6	459.8
60°	290.6	293.8	296.9	301.3	305.7	314.5	323.2	339.5	355.8	380.8	405.9
62.5°	260.6	261.2	261.8	265.6	269.4	275.6	281.9	295.0	308.2	333.2	358.3
65°	226.8	228.6	230.5	232.4	234.3	239.3	244.3	255.6	266.8	285.6	304.4
67.5°	191.7	193.6	195.4	198.6	201.7	206.1	210.5	218.0	225.5	243.0	260.6
70°	149.1	149.1	149.1	154.1	159.1	166.6	174.1	179.8	185.4	199.8	214.2
72.5°	121.5	122.1	122.8	123.4	124.0	128.4	132.8	142.2	151.6	160.4	169.1
75°	99.0	99.6	100.2	100.8	101.5	102.7	104.0	107.1	110.2	120.3	130.3
77.5°	78.9	79.6	80.2	80.8	81.4	82.7	83.9	85.2	86.4	90.2	94.0
80°	60.1	60.8	61.4	62.0	62.6	63.3	63.9	65.1	66.4	68.3	70.2
82.5°	43.8	43.8	43.8	43.8	43.8	45.1	46.4	46.4	46.4	47.6	48.9
85°	27.6	27.6	27.6	28.2	28.8	28.8	28.8	29.4	30.1	30.1	30.1
87.5°	12.5	11.9	11.3	11.9	12.5	12.5	12.5	13.2	13.8	13.8	13.8
90°	14.0	13.7	13.5	13.3	13.1	12.8	12.4	12.0	11.6	11.2	9.8
92.5°	15.8	15.7	15.6	15.5	15.4	15.0	14.3	13.5	12.8	12.1	11.2
95°	17.7	17.7	17.7	17.7	17.7	17.3	16.6	15.9	15.1	14.4	13.3
97.5°	19.1	19.0	18.9	18.8	18.7	18.2	17.4	16.5	15.7	14.9	20.2
100°	19.5	19.4	19.3	19.2	19.1	18.7	17.8	17.0	16.2	15.3	31.5
102.5°	20.0	19.8	19.6	19.4	19.2	20.8	24.2	27.6	31.0	34.4	52.4
105°	20.5	20.3	20.0	19.8	19.6	28.7	47.0	65.3	83.5	101.8	111.1
107.5°	48.4	61.9	75.4	89.0	102.5	117.2	133.1	149.1	165.0	180.9	179.3
110°	127.9	142.7	157.4	172.2	187.0	196.1	199.5	202.9	206.3	209.7	208.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	242.3	242.5	242.7	242.9	243.1	242.7	241.8	240.9	239.9	239.0	237.9
115°	273.4	273.0	272.6	272.2	271.8	271.0	270.0	269.0	267.9	266.9	266.0
117.5°	298.5	298.4	298.3	298.2	298.1	297.7	296.8	296.0	295.2	294.4	293.8
120°	324.6	324.6	324.6	324.6	324.6	324.2	323.3	322.5	321.7	320.9	320.5
122.5°	350.2	350.0	349.9	349.8	349.7	349.4	348.9	348.4	347.9	347.4	346.9
125°	373.9	373.7	373.5	373.2	373.0	372.8	372.6	372.4	372.2	372.0	371.6
127.5°	397.1	397.3	397.5	397.7	397.9	397.9	397.6	397.3	397.0	396.7	396.1
130°	419.4	419.6	419.9	420.1	420.3	420.2	419.7	419.3	418.9	418.5	418.1
132.5°	439.9	440.2	440.5	440.8	441.1	441.1	440.7	440.3	439.8	439.4	439.1
135°	460.8	461.1	461.4	461.8	462.1	462.1	461.8	461.4	461.1	460.8	460.4
137.5°	480.8	481.0	481.2	481.4	481.6	481.5	481.0	480.5	479.9	479.4	479.2
140°	498.5	498.7	498.9	499.1	499.3	499.2	498.8	498.4	498.0	497.6	497.3
142.5°	514.8	515.1	515.4	515.7	516.0	516.0	515.7	515.4	515.1	514.8	514.5
145°	531.5	531.5	531.5	531.5	531.5	531.4	531.2	531.0	530.8	530.6	530.4
147.5°	543.6	544.1	544.6	545.1	545.7	545.8	545.6	545.4	545.2	545.0	544.8
150°	557.5	557.9	558.2	558.5	558.8	558.8	558.6	558.4	558.2	558.0	557.8
152.5°	568.7	569.2	569.7	570.3	570.8	570.8	570.4	570.0	569.6	569.2	569.1
155°	578.9	579.6	580.2	580.8	581.4	581.5	581.0	580.4	579.9	579.4	579.3
157.5°	587.8	588.6	589.4	590.3	591.1	591.2	590.6	589.9	589.3	588.7	588.8
160°	596.1	596.9	597.6	598.3	599.0	599.1	598.5	597.8	597.2	596.6	596.7
162.5°	604.0	604.7	605.3	605.9	606.5	606.5	605.8	605.0	604.3	603.6	603.7
165°	610.1	610.8	611.5	612.3	613.0	612.9	612.1	611.3	610.5	609.6	609.7
167.5°	614.7	615.6	616.4	617.2	618.0	618.0	617.2	616.4	615.6	614.7	614.7
170°	618.9	619.8	620.6	621.4	622.2	622.2	621.4	620.6	619.8	618.9	618.9
172.5°	621.3	622.2	623.1	624.0	625.0	625.0	624.2	623.4	622.5	621.7	621.6
175°	623.6	624.4	625.2	626.1	626.9	626.9	626.2	625.5	624.8	624.0	623.9
177.5°	624.0	625.1	626.1	627.1	628.2	628.3	627.5	626.6	625.8	625.0	624.9
180°	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6
2.5°	3244.1	3241.0	3210.9	3180.8	3151.4	3122.0	3100.0	3078.1	3041.2	3004.2	2981.0
5°	3445.2	3421.4	3373.8	3326.2	3254.8	3183.3	3123.2	3063.1	2986.7	2910.2	2846.3
7.5°	3557.3	3537.9	3480.3	3422.6	3328.0	3233.5	3139.5	3045.5	2932.8	2820.0	2723.6
10°	3560.4	3576.7	3529.1	3481.5	3375.0	3268.5	3140.7	3013.0	2861.4	2709.8	2585.1
12.5°	3448.9	3519.1	3509.1	3499.0	3390.7	3282.3	3127.0	2971.6	2785.6	2599.5	2443.6
15°	3240.3	3376.3	3416.4	3456.5	3366.9	3277.3	3100.7	2924.0	2705.4	2486.8	2307.6
17.5°	2971.6	3162.0	3267.9	3373.8	3308.6	3243.5	3049.9	2856.4	2610.2	2364.0	2169.2
20°	2653.4	2902.7	3068.7	3234.7	3210.9	3187.1	2987.3	2787.5	2521.9	2256.3	2045.2
22.5°	2339.0	2602.0	2831.3	3060.6	3085.0	3109.4	2907.7	2706.0	2415.4	2124.7	1909.9
25°	2067.7	2335.2	2608.3	2881.4	2936.5	2991.7	2800.0	2608.3	2307.0	2005.7	1792.1
27.5°	1809.0	2063.3	2364.0	2664.7	2764.9	2865.1	2689.7	2514.4	2200.5	1886.7	1673.7
30°	1597.9	1825.3	2132.3	2439.2	2578.9	2718.6	2557.6	2396.6	2085.3	1774.0	1565.4
32.5°	1401.2	1604.8	1913.0	2221.2	2383.4	2545.7	2406.6	2267.6	1968.1	1668.7	1462.6
35°	1245.9	1428.2	1715.7	2003.2	2184.9	2366.5	2252.5	2138.5	1846.0	1553.5	1358.7
37.5°	1112.5	1265.3	1535.3	1805.3	1998.2	2191.1	2095.9	2000.7	1725.7	1450.7	1266.6
40°	1002.2	1125.0	1376.2	1627.4	1816.5	2005.7	1924.3	1842.9	1596.7	1350.5	1178.2
42.5°	907.6	1013.5	1239.0	1464.5	1638.0	1811.5	1757.7	1703.8	1480.8	1257.8	1098.1
45°	824.3	913.3	1111.9	1310.4	1470.2	1629.9	1587.3	1544.7	1352.4	1160.1	1013.5
47.5°	750.4	826.8	1004.1	1181.4	1324.8	1468.3	1428.8	1389.3	1230.2	1071.1	937.7
50°	682.8	747.9	895.7	1043.6	1172.6	1301.6	1269.1	1236.5	1105.0	973.4	858.2
52.5°	618.9	672.7	805.5	938.3	1042.3	1146.3	1121.2	1096.2	994.7	893.2	788.6
55°	558.1	607.6	719.7	831.9	920.8	1009.7	984.7	959.6	880.7	801.8	709.7
57.5°	503.0	546.2	637.0	727.9	798.7	869.4	857.5	845.6	779.9	714.1	638.3
60°	444.7	483.6	561.9	640.2	697.2	754.2	740.4	726.6	679.6	632.7	567.5
62.5°	392.7	427.2	489.8	552.5	598.8	645.2	635.2	625.1	589.4	553.7	499.9
65°	338.3	372.1	422.8	473.6	509.9	546.2	537.4	528.7	501.7	474.8	431.6
67.5°	288.8	317.0	360.8	404.7	429.1	453.5	448.5	443.5	422.8	402.1	368.3
70°	238.7	263.1	299.4	335.7	352.7	369.6	371.5	373.3	354.5	335.7	310.7
72.5°	188.5	208.0	241.8	275.6	288.8	301.9	301.3	300.7	289.4	278.1	255.6
75°	144.7	159.1	185.4	211.7	223.0	234.3	236.8	239.3	228.6	218.0	205.5
77.5°	104.0	114.0	134.0	154.1	166.6	179.1	180.4	181.7	176.6	171.6	159.7
80°	73.3	76.4	88.9	101.5	114.6	127.8	129.7	131.5	126.5	121.5	114.0
82.5°	50.7	52.6	57.0	61.4	72.0	82.7	85.2	87.7	85.2	82.7	74.5
85°	30.7	31.3	33.2	35.1	40.1	45.1	47.6	50.1	48.9	47.6	43.2
87.5°	13.8	13.8	14.4	15.0	16.3	17.5	20.7	23.8	21.9	20.0	18.2
90°	8.5	7.1	5.8	4.6	3.6	2.5	1.5	0.5	1.5	2.5	3.6
92.5°	10.2	9.3	8.4	8.2	8.8	9.5	10.1	10.7	10.1	9.5	8.8
95°	12.1	11.0	9.9	11.4	15.7	19.9	24.1	28.4	24.1	19.9	15.7
97.5°	25.4	30.7	36.0	40.0	42.9	45.8	48.7	51.6	48.7	45.8	42.9
100°	47.6	63.7	79.8	86.9	84.8	82.7	80.7	78.6	80.7	82.7	84.8
102.5°	70.4	88.4	106.3	114.7	113.3	112.0	110.6	109.3	110.6	112.0	113.3
105°	120.4	129.7	139.0	143.1	142.0	140.8	139.7	138.6	139.7	140.8	142.0
107.5°	177.8	176.2	174.7	173.4	172.5	171.6	170.7	169.7	170.7	171.6	172.5
110°	207.4	206.3	205.2	204.2	203.4	202.5	201.7	200.9	201.7	202.5	203.4



TEST NUMBER: P831996

CATALOG NUMBER: S123RDIP-S1165D585U930-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	236.7	235.6	234.5	233.5	232.8	232.1	231.4	230.6	231.4	232.1	232.8
115°	265.1	264.1	263.2	262.4	261.8	261.2	260.6	259.9	260.6	261.2	261.8
117.5°	293.3	292.8	292.3	291.7	290.9	290.2	289.5	288.8	289.5	290.2	290.9
120°	320.2	319.9	319.6	319.0	318.1	317.1	316.2	315.3	316.2	317.1	318.1
122.5°	346.5	346.1	345.7	345.1	344.4	343.7	343.0	342.2	343.0	343.7	344.4
125°	371.2	370.8	370.4	369.7	368.9	368.1	367.3	366.4	367.3	368.1	368.9
127.5°	395.6	395.1	394.6	393.9	393.1	392.3	391.4	390.6	391.4	392.3	393.1
130°	417.7	417.3	416.9	416.2	415.4	414.6	413.8	412.9	413.8	414.6	415.4
132.5°	438.8	438.5	438.2	437.6	436.8	436.0	435.1	434.3	435.1	436.0	436.8
135°	460.0	459.6	459.2	458.7	458.0	457.4	456.8	456.2	456.8	457.4	458.0
137.5°	479.0	478.8	478.6	478.1	477.3	476.4	475.6	474.8	475.6	476.4	477.3
140°	496.9	496.6	496.3	495.9	495.2	494.6	494.0	493.4	494.0	494.6	495.2
142.5°	514.1	513.8	513.5	513.1	512.4	511.8	511.2	510.6	511.2	511.8	512.4
145°	530.2	530.0	529.7	529.3	528.6	527.8	527.1	526.4	527.1	527.8	528.6
147.5°	544.6	544.4	544.2	543.8	543.3	542.8	542.3	541.7	542.3	542.8	543.3
150°	557.6	557.4	557.2	556.9	556.6	556.3	556.0	555.7	556.0	556.3	556.6
152.5°	569.0	568.9	568.8	568.7	568.6	568.4	568.3	568.2	568.3	568.4	568.6
155°	579.2	579.1	579.0	579.0	579.2	579.5	579.7	579.9	579.7	579.5	579.2
157.5°	588.9	589.0	589.1	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2
160°	596.8	596.9	597.0	597.1	597.2	597.3	597.4	597.5	597.4	597.3	597.2
162.5°	603.8	603.9	604.0	604.2	604.5	604.8	605.1	605.4	605.1	604.8	604.5
165°	609.8	609.9	610.0	610.2	610.6	610.9	611.2	611.5	611.2	610.9	610.6
167.5°	614.7	614.7	614.7	614.9	615.4	615.8	616.2	616.6	616.2	615.8	615.4
170°	618.9	618.9	618.9	619.1	619.5	620.0	620.4	620.8	620.4	620.0	619.5
172.5°	621.5	621.4	621.3	621.5	622.0	622.5	623.1	623.6	623.1	622.5	622.0
175°	623.8	623.7	623.6	623.8	624.4	624.9	625.4	625.9	625.4	624.9	624.4
177.5°	624.8	624.7	624.6	624.8	625.3	625.8	626.3	626.8	626.3	625.8	625.3
180°	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9



TEST NUMBER: P831996

CATALOG NUMBER: S123RDIP-S1165D585U930-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6
2.5°	2957.8	2922.1	2886.4	2860.7	2835.1	2803.1	2771.2	2769.9	2768.7	2744.9	2721.1
5°	2782.4	2720.4	2658.4	2597.7	2536.9	2476.1	2415.4	2401.6	2387.8	2367.1	2346.5
7.5°	2627.1	2528.1	2429.2	2351.5	2273.8	2213.1	2152.3	2111.0	2069.6	2037.7	2005.7
10°	2460.5	2337.7	2214.9	2121.0	2027.0	1961.2	1895.5	1847.9	1800.3	1777.7	1755.2
12.5°	2287.6	2154.2	2020.8	1928.7	1836.6	1757.7	1678.7	1635.5	1592.3	1561.0	1529.7
15°	2128.5	1985.0	1841.6	1743.9	1646.2	1572.3	1498.3	1455.1	1411.9	1380.6	1349.3
17.5°	1974.4	1829.7	1685.0	1586.0	1487.1	1420.0	1353.0	1311.0	1269.1	1249.7	1230.2
20°	1834.1	1688.1	1542.2	1448.9	1355.5	1289.7	1224.0	1201.4	1178.9	1160.7	1142.5
22.5°	1695.0	1554.7	1414.4	1324.8	1235.3	1187.6	1140.0	1121.9	1103.7	1089.9	1076.1
25°	1578.5	1438.8	1299.1	1220.8	1142.5	1105.6	1068.6	1056.7	1044.8	1031.0	1017.3
27.5°	1460.8	1328.0	1195.2	1132.5	1069.9	1039.8	1009.7	994.7	979.7	968.4	957.1
30°	1356.8	1234.0	1111.2	1059.2	1007.2	980.9	954.6	938.3	922.1	911.4	900.8
32.5°	1256.5	1147.6	1038.6	994.1	949.6	923.9	898.3	882.6	866.9	854.4	841.9
35°	1163.8	1069.3	974.7	934.0	893.2	867.6	841.9	826.2	810.6	798.0	785.5
37.5°	1082.4	996.6	910.8	872.6	834.4	811.8	789.3	773.0	756.7	743.5	730.4
40°	1006.0	930.2	854.4	817.4	780.5	756.1	731.6	717.2	702.8	690.9	679.0
42.5°	938.3	868.8	799.3	762.9	726.6	703.4	680.3	663.4	646.4	639.5	632.7
45°	866.9	805.5	744.2	709.1	674.0	649.6	625.1	610.7	596.3	590.1	583.8
47.5°	804.3	747.3	690.3	655.8	621.4	599.5	577.5	566.3	555.0	546.2	537.4
50°	742.9	687.8	632.7	599.5	566.3	547.5	528.7	514.9	501.1	494.9	488.6
52.5°	684.0	633.9	583.8	550.0	516.1	498.0	479.8	467.9	456.0	442.9	429.7
55°	617.6	573.8	529.9	499.9	469.8	451.0	432.2	418.4	404.7	390.9	377.1
57.5°	562.5	519.3	476.1	449.1	422.2	404.0	385.9	370.8	355.8	344.5	333.2
60°	502.4	464.8	427.2	400.9	374.6	357.0	339.5	325.1	310.7	305.1	299.4
62.5°	446.0	410.9	375.8	352.7	329.5	312.6	295.7	286.3	276.9	273.1	269.4
65°	388.4	358.3	328.2	306.9	285.6	271.2	256.8	252.4	248.1	244.9	241.8
67.5°	334.5	308.8	283.1	264.3	245.5	235.5	225.5	220.5	215.5	211.7	208.0
70°	285.6	263.1	240.5	224.2	208.0	198.6	189.2	184.8	180.4	173.5	166.6
72.5°	233.0	215.5	197.9	185.4	172.9	164.7	156.6	147.8	139.1	132.8	126.5
75°	192.9	175.4	157.9	146.0	134.0	124.7	115.3	112.1	109.0	107.1	105.2
77.5°	147.8	132.8	117.8	108.4	99.0	94.6	90.2	88.3	86.4	85.8	85.2
80°	106.5	94.0	81.4	76.4	71.4	70.2	68.9	67.7	66.4	65.8	65.1
82.5°	66.4	60.1	53.9	52.6	51.4	50.7	50.1	49.5	48.9	48.2	47.6
85°	38.8	36.3	33.8	33.2	32.6	31.9	31.3	31.3	31.3	31.3	31.3
87.5°	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	15.7	15.0
90°	4.6	5.8	7.1	8.5	9.8	11.2	11.6	12.0	12.4	12.8	13.1
92.5°	8.2	8.4	9.3	10.2	11.2	12.1	12.8	13.5	14.3	15.0	15.4
95°	11.4	9.9	11.0	12.1	13.3	14.4	15.1	15.9	16.6	17.3	17.7
97.5°	40.0	36.0	30.7	25.4	20.2	14.9	15.7	16.5	17.4	18.2	18.7
100°	86.9	79.8	63.7	47.6	31.5	15.3	16.2	17.0	17.8	18.7	19.1
102.5°	114.7	106.3	88.4	70.4	52.4	34.4	31.0	27.6	24.2	20.8	19.2
105°	143.1	139.0	129.7	120.4	111.1	101.8	83.5	65.3	47.0	28.7	19.6
107.5°	173.4	174.7	176.2	177.8	179.3	180.9	165.0	149.1	133.1	117.2	102.5
110°	204.2	205.2	206.3	207.4	208.6	209.7	206.3	202.9	199.5	196.1	187.0



TEST NUMBER: P831996

CATALOG NUMBER: S123RDIP-S1165D585U930-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	233.5	234.5	235.6	236.7	237.9	239.0	239.9	240.9	241.8	242.7	243.1
115°	262.4	263.2	264.1	265.1	266.0	266.9	267.9	269.0	270.0	271.0	271.8
117.5°	291.7	292.3	292.8	293.3	293.8	294.4	295.2	296.0	296.8	297.7	298.1
120°	319.0	319.6	319.9	320.2	320.5	320.9	321.7	322.5	323.3	324.2	324.6
122.5°	345.1	345.7	346.1	346.5	346.9	347.4	347.9	348.4	348.9	349.4	349.7
125°	369.7	370.4	370.8	371.2	371.6	372.0	372.2	372.4	372.6	372.8	373.0
127.5°	393.9	394.6	395.1	395.6	396.1	396.7	397.0	397.3	397.6	397.9	397.9
130°	416.2	416.9	417.3	417.7	418.1	418.5	418.9	419.3	419.7	420.2	420.3
132.5°	437.6	438.2	438.5	438.8	439.1	439.4	439.8	440.3	440.7	441.1	441.1
135°	458.7	459.2	459.6	460.0	460.4	460.8	461.1	461.4	461.8	462.1	462.1
137.5°	478.1	478.6	478.8	479.0	479.2	479.4	479.9	480.5	481.0	481.5	481.6
140°	495.9	496.3	496.6	496.9	497.3	497.6	498.0	498.4	498.8	499.2	499.3
142.5°	513.1	513.5	513.8	514.1	514.5	514.8	515.1	515.4	515.7	516.0	516.0
145°	529.3	529.7	530.0	530.2	530.4	530.6	530.8	531.0	531.2	531.4	531.5
147.5°	543.8	544.2	544.4	544.6	544.8	545.0	545.2	545.4	545.6	545.8	545.7
150°	556.9	557.2	557.4	557.6	557.8	558.0	558.2	558.4	558.6	558.8	558.8
152.5°	568.7	568.8	568.9	569.0	569.1	569.2	569.6	570.0	570.4	570.8	570.8
155°	579.0	579.0	579.1	579.2	579.3	579.4	579.9	580.4	581.0	581.5	581.4
157.5°	589.2	589.1	589.0	588.9	588.8	588.7	589.3	589.9	590.6	591.2	591.1
160°	597.1	597.0	596.9	596.8	596.7	596.6	597.2	597.8	598.5	599.1	599.0
162.5°	604.2	604.0	603.9	603.8	603.7	603.6	604.3	605.0	605.8	606.5	606.5
165°	610.2	610.0	609.9	609.8	609.7	609.6	610.5	611.3	612.1	612.9	613.0
167.5°	614.9	614.7	614.7	614.7	614.7	614.7	615.6	616.4	617.2	618.0	618.0
170°	619.1	618.9	618.9	618.9	618.9	618.9	619.8	620.6	621.4	622.2	622.2
172.5°	621.5	621.3	621.4	621.5	621.6	621.7	622.5	623.4	624.2	625.0	625.0
175°	623.8	623.6	623.7	623.8	623.9	624.0	624.8	625.5	626.2	626.9	626.9
177.5°	624.8	624.6	624.7	624.8	624.9	625.0	625.8	626.6	627.5	628.3	628.2
180°	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9



TEST NUMBER: P831996

CATALOG NUMBER: S123RDIP-S1165D585U930-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	3055.6	3055.6	3055.6	3055.6
2.5°	2714.8	2708.5	2706.0	2703.5
5°	2327.1	2307.6	2303.3	2298.9
7.5°	1997.6	1989.4	1962.5	1935.6
10°	1730.1	1705.0	1693.8	1682.5
12.5°	1506.5	1483.3	1479.5	1475.8
15°	1333.0	1316.7	1311.0	1305.4
17.5°	1219.0	1207.7	1200.8	1193.9
20°	1134.4	1126.3	1121.2	1116.2
22.5°	1069.9	1063.6	1059.9	1056.1
25°	1007.9	998.5	995.3	992.2
27.5°	949.0	940.8	937.7	934.6
30°	893.9	887.0	882.6	878.2
32.5°	833.7	825.6	823.1	820.6
35°	780.5	775.5	773.0	770.5
37.5°	724.1	717.8	714.1	710.3
40°	675.9	672.7	670.9	669.0
42.5°	627.0	621.4	620.8	620.1
45°	578.2	572.5	571.3	570.0
47.5°	532.4	527.4	526.8	526.2
50°	481.7	474.8	469.8	464.8
52.5°	423.4	417.2	412.8	408.4
55°	370.2	363.3	359.6	355.8
57.5°	330.1	327.0	325.1	323.2
60°	297.5	295.7	294.4	293.2
62.5°	267.5	265.6	265.6	265.6
65°	239.9	238.0	236.2	234.3
67.5°	204.2	200.4	199.8	199.2
70°	161.0	155.3	154.7	154.1
72.5°	125.9	125.3	124.0	122.8
75°	104.0	102.7	102.7	102.7
77.5°	83.9	82.7	82.7	82.7
80°	64.5	63.9	64.5	65.1
82.5°	47.6	47.6	47.0	46.4
85°	30.7	30.1	30.1	30.1
87.5°	15.0	15.0	15.0	15.0
90°	13.3	13.5	13.7	14.0
92.5°	15.5	15.6	15.7	15.8
95°	17.7	17.7	17.7	17.7
97.5°	18.8	18.9	19.0	19.1
100°	19.2	19.3	19.4	19.5
102.5°	19.4	19.6	19.8	20.0
105°	19.8	20.0	20.3	20.5
107.5°	89.0	75.4	61.9	48.4
110°	172.2	157.4	142.7	127.9



TEST NUMBER: P831996

CATALOG NUMBER: S123RDIP-S1165D585U930-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	242.9	242.7	242.5	242.3
115°	272.2	272.6	273.0	273.4
117.5°	298.2	298.3	298.4	298.5
120°	324.6	324.6	324.6	324.6
122.5°	349.8	349.9	350.0	350.2
125°	373.2	373.5	373.7	373.9
127.5°	397.7	397.5	397.3	397.1
130°	420.1	419.9	419.6	419.4
132.5°	440.8	440.5	440.2	439.9
135°	461.8	461.4	461.1	460.8
137.5°	481.4	481.2	481.0	480.8
140°	499.1	498.9	498.7	498.5
142.5°	515.7	515.4	515.1	514.8
145°	531.5	531.5	531.5	531.5
147.5°	545.1	544.6	544.1	543.6
150°	558.5	558.2	557.9	557.5
152.5°	570.3	569.7	569.2	568.7
155°	580.8	580.2	579.6	578.9
157.5°	590.3	589.4	588.6	587.8
160°	598.3	597.6	596.9	596.1
162.5°	605.9	605.3	604.7	604.0
165°	612.3	611.5	610.8	610.1
167.5°	617.2	616.4	615.6	614.7
170°	621.4	620.6	619.8	618.9
172.5°	624.0	623.1	622.2	621.3
175°	626.1	625.2	624.4	623.6
177.5°	627.1	626.1	625.1	624.0
180°	625.9	625.9	625.9	625.9



TEST NUMBER: P831996

CATALOG NUMBER: S123RDIP-S1165D585U930-4F0-1E-UDD-G

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	14.43	15.40	15.23	16.21	17.20	19.10	20.06	19.90	20.88	21.87
	3H	15.66	16.53	16.48	17.35	18.37	20.61	21.47	21.42	22.29	23.32
	4H	16.05	16.87	16.88	17.70	18.73	21.10	21.92	21.93	22.75	23.78
	6H	16.34	17.09	17.18	17.93	18.97	21.42	22.17	22.26	23.01	24.05
	8H	16.43	17.14	17.28	18.00	19.05	21.50	22.22	22.35	23.07	24.12
	12H	16.49	17.16	17.34	18.01	19.09	21.54	22.22	22.39	23.07	24.14
4H	2H	15.17	15.99	16.00	16.81	17.85	19.11	19.92	19.94	20.75	21.79
	3H	16.55	17.23	17.40	18.09	19.14	20.78	21.45	21.62	22.32	23.37
	4H	17.01	17.63	17.87	18.49	19.56	21.39	22.00	22.25	22.86	23.94
	6H	17.39	17.92	18.26	18.80	19.88	21.83	22.36	22.71	23.25	24.33
	8H	17.51	18.01	18.39	18.89	19.98	21.97	22.46	22.84	23.34	24.43
	12H	17.60	18.04	18.49	18.94	20.04	22.04	22.48	22.93	23.38	24.48
8H	4H	17.34	17.83	18.21	18.71	19.80	21.37	21.86	22.24	22.74	23.83
	6H	17.80	18.21	18.71	19.13	20.23	21.87	22.27	22.77	23.19	24.29
	8H	18.00	18.36	18.91	19.27	20.38	22.05	22.41	22.97	23.33	24.44
	12H	18.14	18.46	19.06	19.37	20.53	22.17	22.49	23.09	23.40	24.56
12H	4H	17.35	17.80	18.25	18.70	19.79	21.32	21.76	22.22	22.66	23.76
	6H	17.86	18.22	18.78	19.14	20.25	21.84	22.20	22.75	23.12	24.23
	8H	18.09	18.40	19.00	19.31	20.47	22.04	22.36	22.95	23.26	24.43