

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: P831846

Luminaire Tested: S123RDIP-S1000D585U830-4F0-1E-UDD-G

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831846
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-S1000D585U830-4F0-1E-UDD-G
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 585 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: -

Summary

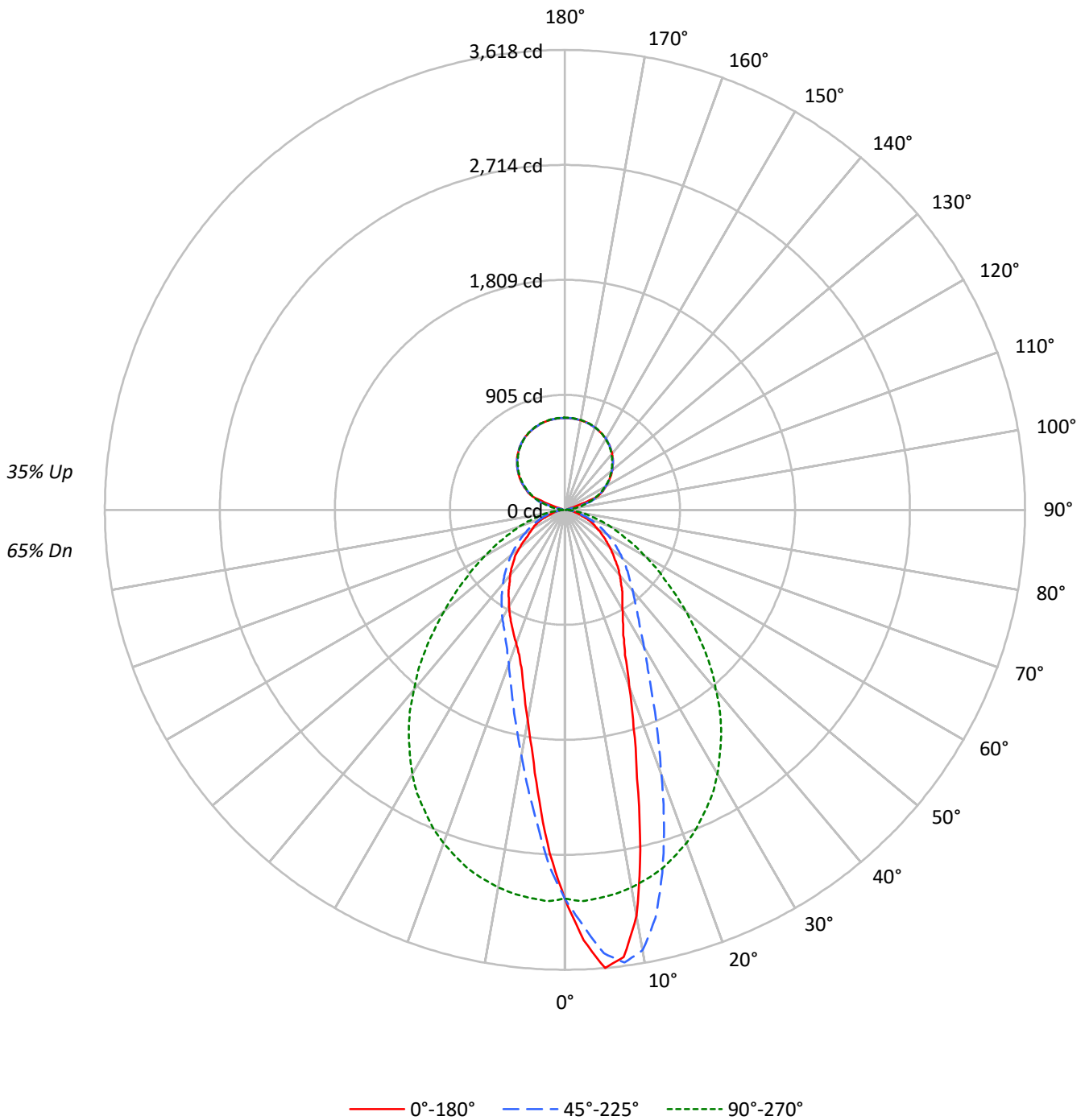
Lumens per Lamp: N/A
Luminaire Lumens: 6262.5 lumens
Efficiency: N/A
Efficacy: 124.5 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Direct

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					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	104	104	104	104	92	92	92	80	80	80	70	70	70	65				
1	102	98	94	91	96	92	89	86	82	80	77	72	70	69	63	62	61	57				
2	94	87	81	76	88	82	77	73	73	69	66	65	62	59	57	55	53	49				
3	86	78	71	65	81	73	67	62	66	61	57	58	55	52	52	49	46	43				
4	80	70	62	56	75	66	59	54	59	54	50	53	49	45	47	44	41	38				
5	74	63	55	49	69	60	53	47	54	48	44	48	44	40	43	40	37	34				
6	69	57	49	44	65	54	47	42	49	43	39	44	40	36	40	36	33	31				
7	64	52	44	39	60	50	43	38	45	39	35	41	36	33	37	33	30	28				
8	60	48	40	35	56	46	39	34	42	36	32	38	33	30	34	30	28	25				
9	56	44	37	32	53	42	36	31	39	33	29	35	31	27	32	28	25	23				
10	53	41	34	29	50	39	33	28	36	31	27	33	28	25	30	26	23	22				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	32923	32923	32923	32923	32923
5°	39092	37845	33129	26781	24863
10°	35417	38440	32964	21458	18408
15°	24386	32958	32616	17538	14561
20°	16964	25374	31961	14788	12798
25°	12928	19340	31009	13144	11796
30°	11253	15462	29817	12204	10926
35°	10332	13043	28128	11411	10134
40°	9427	11647	25920	10634	9409
45°	8514	10651	23537	9898	8686
50°	7728	9828	20726	9177	7790
55°	6989	9025	18027	8471	6683
60°	6262	8206	15657	7694	6316
65°	5782	7282	13479	6915	5973
70°	4696	6294	11761	6257	4853
75°	4121	5007	9960	5190	4275
80°	3732	4234	8164	4351	4042
85°	3409	3717	6200	3952	3717

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 24835 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	278.8	4.5
10°-20°	645.1	10.3
20°-30°	740.2	11.8
30°-40°	729.6	11.6
40°-50°	643.4	10.3
50°-60°	495.0	7.9
60°-70°	325.4	5.2
70°-80°	158.0	2.5
80°-90°	41.3	0.7
90°-100°	25.5	0.4
100°-110°	123.3	2.0
110°-120°	302.3	4.8
120°-130°	383.8	6.1
130°-140°	410.0	6.5
140°-150°	383.4	6.1
150°-160°	309.2	4.9
160°-170°	199.6	3.2
170°-180°	68.8	1.1
0°-30°	1664.0	26.6
0°-40°	2393.6	38.2
0°-60°	3531.9	56.4
0°-90°	4056.7	64.8
90°-120°	451.1	7.2
90°-150°	1628.3	26.0
90°-180°	2206.0	35.2
0°-180°	6262.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3059	3059	3059	3059	3059	
5°	3618	3502	3066	2479	2301	331
15°	2188	2958	2927	1574	1307	618
25°	1088	1628	2611	1107	993	514
35°	786	993	2141	868	771	490
45°	559	700	1546	650	571	434
55°	372	481	961	451	356	334
65°	227	286	529	272	234	222
75°	99	120	240	125	103	107
85°	28	30	50	32	30	29
90°	16	13	0	13	16	9
95°	20	17	33	17	20	17
105°	24	118	160	118	24	49
115°	316	309	300	309	316	297
125°	432	430	424	430	432	386
135°	533	533	527	533	533	411
145°	614	613	608	613	614	384
155°	669	670	670	670	669	309
165°	705	705	707	705	705	199
175°	721	721	724	721	721	69
180°	724	724	724	724	724	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3058.6	3058.6	3058.6	3058.6	3058.6	3058.6	3058.6	3058.6	3058.6	3058.6	3058.6
2.5°	3389.6	3379.0	3368.3	3365.2	3362.0	3352.0	3342.0	3319.4	3296.8	3273.6	3250.4
5°	3617.9	3619.1	3620.4	3617.2	3614.1	3600.9	3587.8	3560.2	3532.6	3502.5	3472.4
7.5°	3547.6	3567.7	3587.8	3591.5	3595.3	3605.3	3615.4	3609.1	3602.8	3591.5	3580.2
10°	3240.4	3239.1	3237.9	3260.5	3283.0	3350.1	3417.2	3451.7	3486.2	3516.9	3547.6
12.5°	2738.8	2740.7	2742.6	2816.5	2890.5	2953.9	3017.2	3105.0	3192.7	3287.4	3382.1
15°	2188.3	2219.0	2249.7	2315.6	2381.4	2476.7	2572.0	2689.9	2807.8	2957.6	3107.5
17.5°	1797.0	1810.2	1823.4	1886.7	1950.0	2040.3	2130.6	2264.1	2397.7	2590.8	2783.9
20°	1481.0	1492.9	1504.8	1550.6	1596.4	1682.9	1769.4	1896.7	2024.0	2215.2	2406.5
22.5°	1236.5	1259.7	1282.9	1313.6	1344.3	1407.0	1469.7	1599.5	1729.3	1903.6	2077.9
25°	1088.5	1099.2	1109.8	1136.1	1162.5	1222.7	1282.9	1368.8	1454.7	1628.4	1802.0
27.5°	988.2	991.3	994.4	1013.9	1033.3	1072.2	1111.1	1190.7	1270.3	1413.3	1556.2
30°	905.4	911.0	916.7	931.7	946.8	975.0	1003.2	1059.7	1116.1	1244.0	1371.9
32.5°	841.5	844.6	847.7	860.3	872.8	893.5	914.2	958.7	1003.2	1101.0	1198.8
35°	786.3	786.9	787.5	796.9	806.3	826.4	846.5	883.5	920.5	992.6	1064.7
37.5°	723.6	728.0	732.4	739.2	746.1	763.7	781.3	811.4	841.5	901.0	960.6
40°	670.9	674.7	678.4	686.6	694.7	708.5	722.3	749.9	777.5	828.9	880.3
42.5°	618.2	620.7	623.3	631.4	639.6	656.5	673.4	695.4	717.3	759.9	802.6
45°	559.3	565.6	571.8	580.6	589.4	603.8	618.2	640.8	663.4	699.7	736.1
47.5°	510.4	513.5	516.7	524.2	531.7	549.3	566.8	586.9	606.9	640.8	674.7
50°	461.5	462.7	464.0	470.9	477.8	493.5	509.1	532.3	555.5	586.9	618.2
52.5°	415.1	418.2	421.4	428.2	435.1	445.8	456.5	480.3	504.1	534.8	565.6
55°	372.4	374.3	376.2	381.2	386.2	398.8	411.3	432.0	452.7	480.9	509.1
57.5°	332.3	334.8	337.3	341.1	344.9	356.1	367.4	385.6	403.8	432.0	460.2
60°	290.9	294.1	297.2	301.6	306.0	314.8	323.5	339.8	356.1	381.2	406.3
62.5°	260.8	261.5	262.1	265.9	269.6	275.9	282.2	295.3	308.5	333.6	358.7
65°	227.0	228.9	230.7	232.6	234.5	239.5	244.5	255.8	267.1	285.9	304.7
67.5°	191.9	193.7	195.6	198.8	201.9	206.3	210.7	218.2	225.7	243.3	260.8
70°	149.2	149.2	149.2	154.2	159.3	166.8	174.3	180.0	185.6	200.0	214.4
72.5°	121.6	122.3	122.9	123.5	124.1	128.5	132.9	142.3	151.7	160.5	169.3
75°	99.1	99.7	100.3	100.9	101.6	102.8	104.1	107.2	110.4	120.4	130.4
77.5°	79.0	79.6	80.3	80.9	81.5	82.8	84.0	85.3	86.5	90.3	94.1
80°	60.2	60.8	61.4	62.1	62.7	63.3	64.0	65.2	66.5	68.3	70.2
82.5°	43.9	43.9	43.9	43.9	43.9	45.1	46.4	46.4	46.4	47.7	48.9
85°	27.6	27.6	27.6	28.2	28.8	28.8	28.8	29.5	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°	16.1	15.9	15.6	15.4	15.2	14.8	14.3	13.9	13.4	12.9	11.3
92.5°	18.3	18.2	18.0	17.9	17.8	17.3	16.5	15.6	14.8	14.0	12.9
95°	20.4	20.4	20.4	20.4	20.4	20.0	19.2	18.3	17.5	16.7	15.4
97.5°	22.0	21.9	21.8	21.7	21.6	21.0	20.1	19.1	18.2	17.2	23.3
100°	22.6	22.5	22.3	22.2	22.1	21.6	20.6	19.7	18.7	17.7	36.4
102.5°	23.1	22.9	22.6	22.4	22.2	24.0	28.0	31.9	35.8	39.8	60.6
105°	23.7	23.4	23.2	22.9	22.7	33.2	54.3	75.4	96.6	117.7	128.5
107.5°	55.9	71.6	87.2	102.9	118.5	135.5	153.9	172.3	190.7	209.1	207.3
110°	147.8	164.9	182.0	199.1	216.2	226.7	230.6	234.6	238.5	242.5	241.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	280.1	280.3	280.6	280.8	281.0	280.6	279.5	278.5	277.4	276.3	275.0
115°	316.1	315.6	315.1	314.7	314.2	313.4	312.2	311.0	309.8	308.6	307.5
117.5°	345.1	345.0	344.9	344.8	344.7	344.1	343.2	342.2	341.2	340.3	339.7
120°	375.2	375.2	375.2	375.2	375.2	374.8	373.8	372.8	371.9	370.9	370.6
122.5°	404.8	404.7	404.6	404.4	404.3	404.0	403.4	402.8	402.2	401.6	401.1
125°	432.2	432.0	431.7	431.5	431.3	431.0	430.8	430.5	430.3	430.1	429.6
127.5°	459.1	459.3	459.6	459.8	460.1	460.0	459.6	459.3	458.9	458.6	458.0
130°	484.9	485.1	485.4	485.6	485.9	485.7	485.3	484.8	484.3	483.8	483.3
132.5°	508.6	508.9	509.3	509.6	510.0	509.9	509.5	509.0	508.5	508.0	507.7
135°	532.7	533.1	533.5	533.8	534.2	534.2	533.8	533.5	533.1	532.7	532.3
137.5°	555.9	556.1	556.3	556.6	556.8	556.6	556.0	555.4	554.8	554.2	554.0
140°	576.3	576.5	576.8	577.0	577.2	577.1	576.6	576.2	575.7	575.2	574.9
142.5°	595.1	595.5	595.8	596.2	596.5	596.5	596.2	595.8	595.5	595.1	594.7
145°	614.5	614.5	614.5	614.5	614.5	614.3	614.1	613.9	613.6	613.4	613.1
147.5°	628.4	629.0	629.6	630.2	630.8	631.0	630.8	630.5	630.3	630.0	629.8
150°	644.6	644.9	645.3	645.6	646.0	646.1	645.8	645.6	645.3	645.1	644.9
152.5°	657.5	658.1	658.7	659.3	659.9	659.9	659.4	659.0	658.5	658.0	657.9
155°	669.3	670.0	670.7	671.4	672.2	672.2	671.6	671.0	670.4	669.8	669.7
157.5°	679.5	680.5	681.4	682.4	683.3	683.4	682.7	682.0	681.3	680.6	680.7
160°	689.2	690.0	690.9	691.7	692.5	692.6	691.9	691.2	690.4	689.7	689.8
162.5°	698.3	699.0	699.8	700.5	701.2	701.1	700.3	699.5	698.6	697.8	697.9
165°	705.3	706.1	707.0	707.8	708.7	708.6	707.6	706.7	705.7	704.8	704.9
167.5°	710.7	711.6	712.6	713.6	714.5	714.5	713.6	712.6	711.6	710.7	710.7
170°	715.5	716.5	717.4	718.4	719.3	719.3	718.4	717.4	716.5	715.5	715.5
172.5°	718.2	719.3	720.4	721.4	722.5	722.6	721.6	720.7	719.7	718.8	718.6
175°	720.9	721.9	722.8	723.8	724.7	724.8	723.9	723.1	722.3	721.4	721.3
177.5°	721.4	722.6	723.8	725.0	726.2	726.3	725.4	724.4	723.5	722.5	722.4
180°	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	3058.6	3058.6	3058.6	3058.6	3058.6	3058.6	3058.6	3058.6	3058.6	3058.6	3058.6
2.5°	3247.3	3244.2	3214.1	3184.0	3154.5	3125.0	3103.1	3081.1	3044.1	3007.2	2984.0
5°	3448.6	3424.7	3377.1	3329.4	3258.0	3186.5	3126.3	3066.1	2989.6	2913.1	2849.1
7.5°	3560.8	3541.4	3483.7	3426.0	3331.3	3236.6	3142.6	3048.5	2935.7	2822.8	2726.3
10°	3563.9	3580.2	3532.6	3484.9	3378.3	3271.8	3143.8	3015.9	2864.2	2712.5	2587.7
12.5°	3452.3	3522.6	3512.5	3502.5	3394.0	3285.5	3130.0	2974.5	2788.3	2602.1	2446.0
15°	3243.5	3379.6	3419.7	3459.9	3370.2	3280.5	3103.7	2926.9	2708.1	2489.2	2309.9
17.5°	2974.5	3165.2	3271.1	3377.1	3311.9	3246.7	3052.9	2859.2	2612.8	2366.3	2171.3
20°	2656.0	2905.6	3071.7	3237.9	3214.1	3190.2	2990.2	2790.2	2524.4	2258.5	2047.2
22.5°	2341.3	2604.6	2834.1	3063.6	3088.0	3112.5	2910.6	2708.7	2417.8	2126.8	1911.8
25°	2069.8	2337.5	2610.9	2884.3	2939.4	2994.6	2802.7	2610.9	2309.3	2007.7	1793.9
27.5°	1810.8	2065.4	2366.3	2667.3	2767.6	2868.0	2692.4	2516.8	2202.7	1888.6	1675.4
30°	1599.5	1827.1	2134.4	2441.6	2581.4	2721.2	2560.1	2399.0	2087.3	1775.7	1566.9
32.5°	1402.6	1606.4	1914.9	2223.4	2385.8	2548.2	2409.0	2269.8	1970.1	1670.4	1464.1
35°	1247.1	1429.6	1717.4	2005.2	2187.0	2368.9	2254.7	2140.6	1847.8	1555.0	1360.0
37.5°	1113.6	1266.6	1536.8	1807.1	2000.2	2193.3	2098.0	2002.7	1727.4	1452.2	1267.8
40°	1003.2	1126.1	1377.5	1629.0	1818.3	2007.7	1926.2	1844.7	1598.3	1351.8	1179.4
42.5°	908.5	1014.5	1240.2	1466.0	1639.6	1813.3	1759.4	1705.5	1482.3	1259.0	1099.2
45°	825.1	914.2	1112.9	1311.7	1471.6	1631.5	1588.9	1546.2	1353.7	1161.2	1014.5
47.5°	751.2	827.7	1005.1	1182.5	1326.1	1469.7	1430.2	1390.7	1231.5	1072.2	938.6
50°	683.4	748.7	896.6	1044.6	1173.8	1302.9	1270.3	1237.7	1106.1	974.4	859.0
52.5°	619.5	673.4	806.3	939.3	1043.3	1147.4	1122.4	1097.3	995.7	894.1	789.4
55°	558.7	608.2	720.4	832.7	921.7	1010.7	985.7	960.6	881.6	802.6	710.4
57.5°	503.5	546.8	637.7	728.6	799.4	870.3	858.4	846.5	780.6	714.8	638.9
60°	445.2	484.1	562.4	640.8	697.9	754.9	741.1	727.3	680.3	633.3	568.1
62.5°	393.1	427.6	490.3	553.0	599.4	645.8	635.8	625.8	590.0	554.3	500.4
65°	338.6	372.4	423.2	474.0	510.4	546.8	538.0	529.2	502.2	475.3	432.0
67.5°	289.1	317.3	361.2	405.1	429.5	454.0	448.9	443.9	423.2	402.5	368.7
70°	238.9	263.3	299.7	336.1	353.0	369.9	371.8	373.7	354.9	336.1	311.0
72.5°	188.7	208.2	242.0	275.9	289.1	302.2	301.6	301.0	289.7	278.4	255.8
75°	144.8	159.3	185.6	211.9	223.2	234.5	237.0	239.5	228.9	218.2	205.7
77.5°	104.1	114.1	134.2	154.2	166.8	179.3	180.6	181.8	176.8	171.8	159.9
80°	73.4	76.5	89.0	101.6	114.7	127.9	129.8	131.7	126.7	121.6	114.1
82.5°	50.8	52.7	57.1	61.4	72.1	82.8	85.3	87.8	85.3	82.8	74.6
85°	30.7	31.4	33.2	35.1	40.1	45.1	47.7	50.2	48.9	47.7	43.3
87.5°	13.8	13.8	14.4	15.0	16.3	17.6	20.7	23.8	21.9	20.1	18.2
90°	9.8	8.2	6.7	5.3	4.1	2.9	1.7	0.5	1.7	2.9	4.1
92.5°	11.8	10.8	9.7	9.5	10.2	10.9	11.6	12.4	11.6	10.9	10.2
95°	14.0	12.7	11.4	13.2	18.1	23.0	27.9	32.8	27.9	23.0	18.1
97.5°	29.4	35.5	41.6	46.3	49.6	53.0	56.3	59.7	56.3	53.0	49.6
100°	55.0	73.6	92.3	100.4	98.0	95.6	93.2	90.9	93.2	95.6	98.0
102.5°	81.4	102.1	122.9	132.5	131.0	129.4	127.9	126.3	127.9	129.4	131.0
105°	139.2	150.0	160.7	165.5	164.1	162.8	161.5	160.2	161.5	162.8	164.1
107.5°	205.5	203.7	202.0	200.5	199.4	198.4	197.3	196.2	197.3	198.4	199.4
110°	239.8	238.5	237.2	236.1	235.1	234.1	233.2	232.2	233.2	234.1	235.1



TEST NUMBER: P831846

CATALOG NUMBER: S123RDIP-S1000D585U830-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	273.7	272.4	271.1	270.0	269.2	268.3	267.5	266.6	267.5	268.3	269.2
115°	306.4	305.3	304.3	303.4	302.7	301.9	301.2	300.5	301.2	301.9	302.7
117.5°	339.1	338.5	337.9	337.2	336.3	335.5	334.7	333.8	334.7	335.5	336.3
120°	370.2	369.9	369.5	368.8	367.7	366.6	365.6	364.5	365.6	366.6	367.7
122.5°	400.6	400.1	399.7	399.0	398.2	397.3	396.5	395.7	396.5	397.3	398.2
125°	429.1	428.6	428.2	427.4	426.5	425.5	424.6	423.6	424.6	425.5	426.5
127.5°	457.4	456.8	456.2	455.4	454.4	453.5	452.5	451.6	452.5	453.5	454.4
130°	482.9	482.4	481.9	481.2	480.2	479.3	478.3	477.4	478.3	479.3	480.2
132.5°	507.3	506.9	506.6	505.9	505.0	504.0	503.1	502.1	503.1	504.0	505.0
135°	531.8	531.3	530.8	530.2	529.5	528.8	528.1	527.4	528.1	528.8	529.5
137.5°	553.8	553.5	553.3	552.7	551.7	550.8	549.8	548.9	549.8	550.8	551.7
140°	574.5	574.1	573.8	573.2	572.5	571.8	571.1	570.4	571.1	571.8	572.5
142.5°	594.4	594.0	593.7	593.1	592.4	591.7	591.0	590.3	591.0	591.7	592.4
145°	612.9	612.7	612.4	611.9	611.1	610.2	609.4	608.5	609.4	610.2	611.1
147.5°	629.6	629.3	629.1	628.7	628.1	627.5	626.9	626.3	626.9	627.5	628.1
150°	644.6	644.4	644.1	643.8	643.5	643.1	642.8	642.4	642.8	643.1	643.5
152.5°	657.8	657.6	657.5	657.4	657.3	657.2	657.0	656.9	657.0	657.2	657.3
155°	669.6	669.5	669.4	669.4	669.7	669.9	670.1	670.4	670.1	669.9	669.7
157.5°	680.8	680.9	681.1	681.1	681.1	681.1	681.1	681.1	681.1	681.1	681.1
160°	690.0	690.1	690.2	690.3	690.4	690.6	690.7	690.8	690.7	690.6	690.4
162.5°	698.0	698.1	698.3	698.5	698.9	699.2	699.6	699.9	699.6	699.2	698.9
165°	705.0	705.1	705.3	705.5	705.8	706.2	706.6	706.9	706.6	706.2	705.8
167.5°	710.7	710.7	710.7	710.9	711.4	711.9	712.4	712.8	712.4	711.9	711.4
170°	715.5	715.5	715.5	715.8	716.2	716.7	717.2	717.7	717.2	716.7	716.2
172.5°	718.5	718.4	718.3	718.5	719.1	719.7	720.3	720.9	720.3	719.7	719.1
175°	721.2	721.1	721.0	721.2	721.8	722.4	723.0	723.6	723.0	722.4	721.8
177.5°	722.3	722.2	722.0	722.3	722.9	723.5	724.1	724.7	724.1	723.5	722.9
180°	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6



TEST NUMBER: P831846

CATALOG NUMBER: S123RDIP-S1000D585U830-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	3058.6	3058.6	3058.6	3058.6	3058.6	3058.6	3058.6	3058.6	3058.6	3058.6	3058.6
2.5°	2960.8	2925.0	2889.3	2863.6	2837.9	2805.9	2773.9	2772.7	2771.4	2747.6	2723.7
5°	2785.2	2723.1	2661.0	2600.2	2539.4	2478.6	2417.8	2404.0	2390.2	2369.5	2348.8
7.5°	2629.7	2530.6	2431.6	2353.8	2276.1	2215.2	2154.4	2113.0	2071.7	2039.7	2007.7
10°	2462.9	2340.0	2217.1	2123.1	2029.0	1963.2	1897.3	1849.7	1802.0	1779.5	1756.9
12.5°	2289.9	2156.3	2022.7	1930.6	1838.4	1759.4	1680.4	1637.1	1593.9	1562.5	1531.2
15°	2130.6	1987.0	1843.4	1745.6	1647.8	1573.8	1499.8	1456.6	1413.3	1381.9	1350.6
17.5°	1976.3	1831.5	1686.7	1587.6	1488.5	1421.4	1354.3	1312.3	1270.3	1250.9	1231.5
20°	1835.9	1689.8	1543.7	1450.3	1356.9	1291.0	1225.2	1202.6	1180.0	1161.9	1143.7
22.5°	1696.7	1556.2	1415.8	1326.1	1236.5	1188.8	1141.2	1123.0	1104.8	1091.0	1077.2
25°	1580.1	1440.2	1300.4	1222.0	1143.7	1106.7	1069.7	1057.8	1045.9	1032.1	1018.3
27.5°	1462.2	1329.3	1196.3	1133.6	1070.9	1040.8	1010.7	995.7	980.6	969.4	958.1
30°	1358.1	1235.2	1112.3	1060.3	1008.2	981.9	955.6	939.3	923.0	912.3	901.6
32.5°	1257.8	1148.7	1039.6	995.1	950.6	924.8	899.1	883.5	867.8	855.2	842.7
35°	1165.0	1070.3	975.6	934.9	894.1	868.4	842.7	827.0	811.4	798.8	786.3
37.5°	1083.5	997.6	911.7	873.4	835.2	812.6	790.0	773.7	757.4	744.3	731.1
40°	1007.0	931.1	855.2	818.3	781.3	756.8	732.4	717.9	703.5	691.6	679.7
42.5°	939.3	869.7	800.1	763.7	727.3	704.1	680.9	664.0	647.1	640.2	633.3
45°	867.8	806.3	744.9	709.8	674.7	650.2	625.8	611.3	596.9	590.6	584.4
47.5°	805.1	748.0	691.0	656.5	622.0	600.1	578.1	566.8	555.5	546.8	538.0
50°	743.6	688.5	633.3	600.1	566.8	548.0	529.2	515.4	501.6	495.3	489.1
52.5°	684.7	634.5	584.4	550.5	516.7	498.5	480.3	468.4	456.5	443.3	430.1
55°	618.2	574.3	530.5	500.4	470.3	451.4	432.6	418.8	405.1	391.3	377.5
57.5°	563.1	519.8	476.5	449.6	422.6	404.4	386.2	371.2	356.1	344.9	333.6
60°	502.9	465.2	427.6	401.3	375.0	357.4	339.8	325.4	311.0	305.4	299.7
62.5°	446.4	411.3	376.2	353.0	329.8	312.9	296.0	286.5	277.1	273.4	269.6
65°	388.7	358.7	328.6	307.2	285.9	271.5	257.1	252.7	248.3	245.2	242.0
67.5°	334.8	309.1	283.4	264.6	245.8	235.8	225.7	220.7	215.7	211.9	208.2
70°	285.9	263.3	240.8	224.5	208.2	198.8	189.4	185.0	180.6	173.7	166.8
72.5°	233.2	215.7	198.1	185.6	173.1	164.9	156.8	148.0	139.2	132.9	126.7
75°	193.1	175.6	158.0	146.1	134.2	124.8	115.4	112.2	109.1	107.2	105.3
77.5°	148.0	132.9	117.9	108.5	99.1	94.7	90.3	88.4	86.5	85.9	85.3
80°	106.6	94.1	81.5	76.5	71.5	70.2	69.0	67.7	66.5	65.8	65.2
82.5°	66.5	60.2	53.9	52.7	51.4	50.8	50.2	49.5	48.9	48.3	47.7
85°	38.9	36.4	33.9	33.2	32.6	32.0	31.4	31.4	31.4	31.4	31.4
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°	5.3	6.7	8.2	9.8	11.3	12.9	13.4	13.9	14.3	14.8	15.2
92.5°	9.5	9.7	10.8	11.8	12.9	14.0	14.8	15.6	16.5	17.3	17.8
95°	13.2	11.4	12.7	14.0	15.4	16.7	17.5	18.3	19.2	20.0	20.4
97.5°	46.3	41.6	35.5	29.4	23.3	17.2	18.2	19.1	20.1	21.0	21.6
100°	100.4	92.3	73.6	55.0	36.4	17.7	18.7	19.7	20.6	21.6	22.1
102.5°	132.5	122.9	102.1	81.4	60.6	39.8	35.8	31.9	28.0	24.0	22.2
105°	165.5	160.7	150.0	139.2	128.5	117.7	96.6	75.4	54.3	33.2	22.7
107.5°	200.5	202.0	203.7	205.5	207.3	209.1	190.7	172.3	153.9	135.5	118.5
110°	236.1	237.2	238.5	239.8	241.1	242.5	238.5	234.6	230.6	226.7	216.2



TEST NUMBER: P831846

CATALOG NUMBER: S123RDIP-S1000D585U830-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	270.0	271.1	272.4	273.7	275.0	276.3	277.4	278.5	279.5	280.6	281.0
115°	303.4	304.3	305.3	306.4	307.5	308.6	309.8	311.0	312.2	313.4	314.2
117.5°	337.2	337.9	338.5	339.1	339.7	340.3	341.2	342.2	343.2	344.1	344.7
120°	368.8	369.5	369.9	370.2	370.6	370.9	371.9	372.8	373.8	374.8	375.2
122.5°	399.0	399.7	400.1	400.6	401.1	401.6	402.2	402.8	403.4	404.0	404.3
125°	427.4	428.2	428.6	429.1	429.6	430.1	430.3	430.5	430.8	431.0	431.3
127.5°	455.4	456.2	456.8	457.4	458.0	458.6	458.9	459.3	459.6	460.0	460.1
130°	481.2	481.9	482.4	482.9	483.3	483.8	484.3	484.8	485.3	485.7	485.9
132.5°	505.9	506.6	506.9	507.3	507.7	508.0	508.5	509.0	509.5	509.9	510.0
135°	530.2	530.8	531.3	531.8	532.3	532.7	533.1	533.5	533.8	534.2	534.2
137.5°	552.7	553.3	553.5	553.8	554.0	554.2	554.8	555.4	556.0	556.6	556.8
140°	573.2	573.8	574.1	574.5	574.9	575.2	575.7	576.2	576.6	577.1	577.2
142.5°	593.1	593.7	594.0	594.4	594.7	595.1	595.5	595.8	596.2	596.5	596.5
145°	611.9	612.4	612.7	612.9	613.1	613.4	613.6	613.9	614.1	614.3	614.5
147.5°	628.7	629.1	629.3	629.6	629.8	630.0	630.3	630.5	630.8	631.0	630.8
150°	643.8	644.1	644.4	644.6	644.9	645.1	645.3	645.6	645.8	646.1	646.0
152.5°	657.4	657.5	657.6	657.8	657.9	658.0	658.5	659.0	659.4	659.9	659.9
155°	669.4	669.4	669.5	669.6	669.7	669.8	670.4	671.0	671.6	672.2	672.2
157.5°	681.1	681.1	680.9	680.8	680.7	680.6	681.3	682.0	682.7	683.4	683.3
160°	690.3	690.2	690.1	690.0	689.8	689.7	690.4	691.2	691.9	692.6	692.5
162.5°	698.5	698.3	698.1	698.0	697.9	697.8	698.6	699.5	700.3	701.1	701.2
165°	705.5	705.3	705.1	705.0	704.9	704.8	705.7	706.7	707.6	708.6	708.7
167.5°	710.9	710.7	710.7	710.7	710.7	710.7	711.6	712.6	713.6	714.5	714.5
170°	715.8	715.5	715.5	715.5	715.5	715.5	716.5	717.4	718.4	719.3	719.3
172.5°	718.5	718.3	718.4	718.5	718.6	718.8	719.7	720.7	721.6	722.6	722.5
175°	721.2	721.0	721.1	721.2	721.3	721.4	722.3	723.1	723.9	724.8	724.7
177.5°	722.3	722.0	722.2	722.3	722.4	722.5	723.5	724.4	725.4	726.3	726.2
180°	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6



TEST NUMBER: P831846

CATALOG NUMBER: S123RDIP-S1000D585U830-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	3058.6	3058.6	3058.6	3058.6
2.5°	2717.5	2711.2	2708.7	2706.2
5°	2329.4	2309.9	2305.5	2301.1
7.5°	1999.5	1991.4	1964.4	1937.5
10°	1731.8	1706.7	1695.4	1684.2
12.5°	1508.0	1484.8	1481.0	1477.2
15°	1334.3	1318.0	1312.3	1306.7
17.5°	1220.2	1208.9	1202.0	1195.1
20°	1135.5	1127.4	1122.4	1117.3
22.5°	1070.9	1064.7	1060.9	1057.1
25°	1008.9	999.5	996.3	993.2
27.5°	949.9	941.8	938.6	935.5
30°	894.7	887.9	883.5	879.1
32.5°	834.6	826.4	823.9	821.4
35°	781.3	776.2	773.7	771.2
37.5°	724.8	718.6	714.8	711.0
40°	676.5	673.4	671.5	669.6
42.5°	627.6	622.0	621.4	620.7
45°	578.7	573.1	571.8	570.6
47.5°	533.0	527.9	527.3	526.7
50°	482.2	475.3	470.3	465.2
52.5°	423.9	417.6	413.2	408.8
55°	370.6	363.7	359.9	356.1
57.5°	330.4	327.3	325.4	323.5
60°	297.8	296.0	294.7	293.4
62.5°	267.7	265.9	265.9	265.9
65°	240.1	238.3	236.4	234.5
67.5°	204.4	200.6	200.0	199.4
70°	161.1	155.5	154.9	154.2
72.5°	126.0	125.4	124.1	122.9
75°	104.1	102.8	102.8	102.8
77.5°	84.0	82.8	82.8	82.8
80°	64.6	64.0	64.6	65.2
82.5°	47.7	47.7	47.0	46.4
85°	30.7	30.1	30.1	30.1
87.5°	15.0	15.0	15.0	15.0
90°	15.4	15.6	15.9	16.1
92.5°	17.9	18.0	18.2	18.3
95°	20.4	20.4	20.4	20.4
97.5°	21.7	21.8	21.9	22.0
100°	22.2	22.3	22.5	22.6
102.5°	22.4	22.6	22.9	23.1
105°	22.9	23.2	23.4	23.7
107.5°	102.9	87.2	71.6	55.9
110°	199.1	182.0	164.9	147.8



TEST NUMBER: P831846

CATALOG NUMBER: S123RDIP-S1000D585U830-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	280.8	280.6	280.3	280.1
115°	314.7	315.1	315.6	316.1
117.5°	344.8	344.9	345.0	345.1
120°	375.2	375.2	375.2	375.2
122.5°	404.4	404.6	404.7	404.8
125°	431.5	431.7	432.0	432.2
127.5°	459.8	459.6	459.3	459.1
130°	485.6	485.4	485.1	484.9
132.5°	509.6	509.3	508.9	508.6
135°	533.8	533.5	533.1	532.7
137.5°	556.6	556.3	556.1	555.9
140°	577.0	576.8	576.5	576.3
142.5°	596.2	595.8	595.5	595.1
145°	614.5	614.5	614.5	614.5
147.5°	630.2	629.6	629.0	628.4
150°	645.6	645.3	644.9	644.6
152.5°	659.3	658.7	658.1	657.5
155°	671.4	670.7	670.0	669.3
157.5°	682.4	681.4	680.5	679.5
160°	691.7	690.9	690.0	689.2
162.5°	700.5	699.8	699.0	698.3
165°	707.8	707.0	706.1	705.3
167.5°	713.6	712.6	711.6	710.7
170°	718.4	717.4	716.5	715.5
172.5°	721.4	720.4	719.3	718.2
175°	723.8	722.8	721.9	720.9
177.5°	725.0	723.8	722.6	721.4
180°	723.6	723.6	723.6	723.6



TEST NUMBER: P831846

CATALOG NUMBER: S123RDIP-S1000D585U830-4F0-1E-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	14.18	15.11	15.01	15.96	17.00	18.84	19.78	19.67	20.62	21.67
	3H	15.40	16.24	16.25	17.09	18.17	20.35	21.18	21.19	22.04	23.11
	4H	15.79	16.58	16.65	17.44	18.53	20.84	21.63	21.70	22.49	23.58
	6H	16.08	16.80	16.95	17.67	18.77	21.16	21.88	22.03	22.75	23.85
	8H	16.17	16.86	17.05	17.74	18.84	21.24	21.93	22.12	22.82	23.92
	12H	16.22	16.88	17.11	17.76	18.88	21.28	21.93	22.16	22.81	23.94
4H	2H	14.91	15.70	15.78	16.56	17.65	18.85	19.64	19.71	20.50	21.58
	3H	16.29	16.94	17.17	17.84	18.94	20.52	21.17	21.39	22.06	23.16
	4H	16.75	17.34	17.64	18.23	19.36	21.13	21.72	22.01	22.61	23.74
	6H	17.12	17.63	18.03	18.55	19.68	21.57	22.08	22.47	22.99	24.13
	8H	17.25	17.73	18.15	18.64	19.78	21.70	22.18	22.61	23.09	24.23
	12H	17.33	17.76	18.25	18.69	19.83	21.77	22.20	22.69	23.12	24.27
8H	4H	17.07	17.55	17.98	18.46	19.60	21.10	21.58	22.01	22.49	23.63
	6H	17.54	17.93	18.47	18.88	20.03	21.60	21.99	22.53	22.94	24.09
	8H	17.73	18.08	18.67	19.02	20.18	21.79	22.13	22.73	23.08	24.24
	12H	17.88	18.18	18.82	19.12	20.33	21.91	22.21	22.85	23.15	24.36
12H	4H	17.09	17.51	18.01	18.44	19.59	21.06	21.48	21.98	22.41	23.56
	6H	17.60	17.94	18.54	18.89	20.05	21.57	21.92	22.52	22.87	24.03
	8H	17.82	18.13	18.76	19.06	20.27	21.77	22.08	22.72	23.01	24.22