

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: P831263

Luminaire Tested: S123DIP-S1165D585U830-4F0-1E-UDD-G4

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831263  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 05/03/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S1165D585U830-4F0-1E-UDD-G4  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1165 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: -

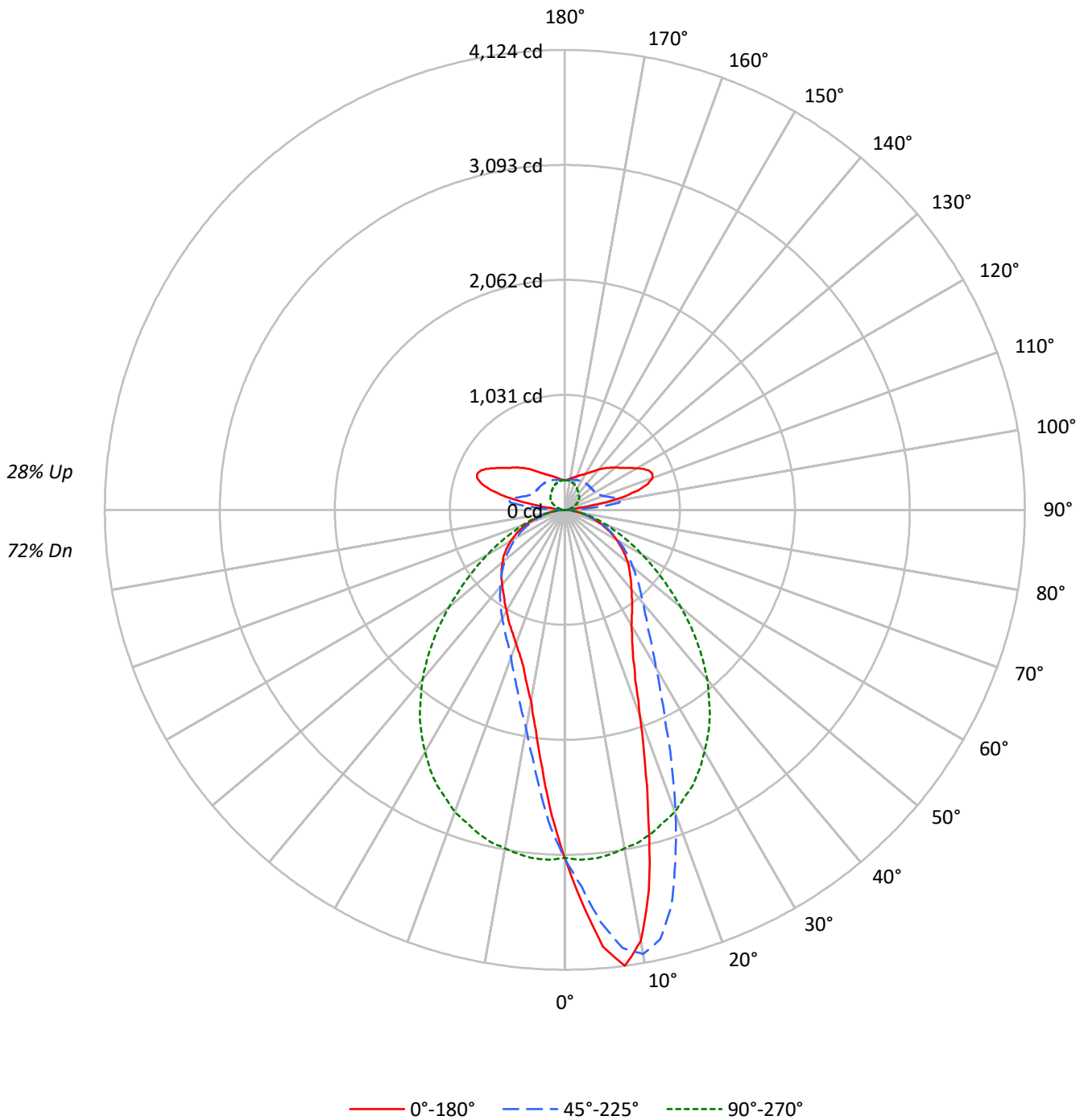
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7017.7 lumens  
Efficiency: N/A  
Efficacy: 122.3 lumens/watt  
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89  
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	
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	112	112	112	112	106	106	106	106	95	95	95	85	85	85	76	76	76	76	76	76	72	
1	103	99	95	92	98	94	91	88	85	82	80	76	74	73	68	67	66	66	66	66	62	
2	95	88	82	77	90	83	78	73	75	71	68	68	65	62	61	59	56	56	56	56	53	
3	87	78	71	65	82	74	68	63	67	62	58	61	57	53	55	52	49	49	49	49	46	
4	80	70	62	56	76	66	59	54	61	55	50	55	50	47	50	46	43	43	43	43	40	
5	74	63	55	49	70	60	53	47	55	49	44	50	45	41	45	42	38	38	38	38	36	
6	69	57	49	43	65	55	47	42	50	44	39	46	41	37	42	38	34	34	34	34	32	
7	64	52	44	39	61	50	43	38	46	40	35	42	37	33	38	34	31	31	31	31	29	
8	60	48	40	35	57	46	39	34	42	36	32	39	34	30	36	32	28	28	28	28	26	
9	56	44	37	32	53	42	35	31	39	33	29	36	31	28	33	29	26	26	26	26	24	
10	53	41	34	29	50	39	33	28	36	31	27	34	29	25	31	27	24	24	24	24	22	

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	33604	33604	33604	33604	33604
5°	42498	40112	33905	27323	25108
10°	42911	44208	33680	21780	19032
15°	32320	41045	33450	18444	16095
20°	22519	33214	33023	16129	14620
25°	17171	25542	32295	14840	13713
30°	14855	20293	31132	13928	12982
35°	13783	17132	29792	13268	12469
40°	13048	15369	27909	12641	12295
45°	12615	14224	25514	12151	12218
50°	12397	13318	22682	11705	12154
55°	11935	12656	19900	11282	12207
60°	11509	11944	17153	10884	12006
65°	10812	11273	14795	10460	11769
70°	9986	10417	12582	9756	11078
75°	9037	9337	10784	9066	10123
80°	7451	8170	8529	7903	8529
85°	5903	6620	6262	6706	6805

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 29131 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	295.1	4.2
10°-20°	734.3	10.5
20°-30°	869.4	12.4
30°-40°	874.2	12.5
40°-50°	802.0	11.4
50°-60°	662.0	9.4
60°-70°	468.3	6.7
70°-80°	250.0	3.6
80°-90°	64.9	0.9
90°-100°	144.1	2.1
100°-110°	421.9	6.0
110°-120°	412.0	5.9
120°-130°	328.1	4.7
130°-140°	258.9	3.7
140°-150°	193.1	2.8
150°-160°	134.7	1.9
160°-170°	79.1	1.1
170°-180°	25.7	0.4
0°-30°	1898.8	27.1
0°-40°	2773.0	39.5
0°-60°	4236.9	60.4
0°-90°	5020.0	71.5
90°-120°	978.1	13.9
90°-150°	1758.2	25.1
90°-180°	1998.0	28.5
0°-180°	7017.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	3122	3122	3122	3122	3122	
5°	3933	3712	3138	2529	2324	375
15°	2900	3683	3002	1655	1444	801
25°	1446	2151	2719	1250	1155	682
35°	1049	1304	2267	1010	949	659
45°	829	934	1676	798	803	642
55°	636	674	1060	601	650	569
65°	424	443	581	411	462	422
75°	217	224	259	218	243	228
85°	48	54	51	54	55	53
90°	16	13	1	13	16	11
95°	62	319	18	319	62	101
105°	684	432	62	432	684	682
115°	832	331	110	331	832	811
125°	656	309	153	309	656	594
135°	532	304	180	304	532	412
145°	416	300	205	300	416	264
155°	345	291	233	291	345	161
165°	300	278	254	278	300	86
175°	270	267	265	267	270	26
180°	266	266	266	266	266	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3121.9	3121.9	3121.9	3121.9	3121.9	3121.9	3121.9	3121.9	3121.9	3121.9	3121.9
2.5°	3518.9	3515.2	3511.6	3493.5	3475.4	3466.7	3458.0	3431.9	3405.9	3376.9	3347.9
5°	3933.2	3943.3	3953.5	3941.9	3930.3	3894.8	3859.3	3812.2	3765.1	3712.3	3659.4
7.5°	4124.4	4130.2	4136.0	4128.8	4121.5	4112.1	4102.7	4060.7	4018.7	3964.3	3910.0
10°	3926.0	3939.0	3952.0	3980.3	4008.5	4040.4	4072.3	4066.5	4060.7	4044.7	4028.8
12.5°	3489.9	3505.8	3521.8	3578.3	3634.8	3707.2	3779.6	3841.9	3904.2	3947.7	3991.1
15°	2900.3	2944.5	2988.6	3040.1	3091.5	3198.0	3304.5	3435.6	3566.7	3683.3	3799.9
17.5°	2388.9	2405.6	2422.2	2477.3	2532.3	2666.3	2800.3	2951.7	3103.1	3296.5	3489.9
20°	1965.9	1981.1	1996.3	2068.7	2141.2	2246.2	2351.2	2521.4	2691.7	2899.6	3107.4
22.5°	1651.5	1675.4	1699.3	1739.9	1780.4	1881.1	1981.8	2133.2	2284.6	2514.2	2743.8
25°	1445.8	1463.2	1480.6	1505.2	1529.8	1610.2	1690.6	1815.2	1939.8	2150.6	2361.4
27.5°	1305.3	1312.5	1319.8	1344.4	1369.0	1421.2	1473.3	1580.5	1687.7	1866.6	2045.6
30°	1195.2	1200.2	1205.3	1227.0	1248.8	1284.3	1319.8	1397.3	1474.8	1632.7	1790.6
32.5°	1118.4	1122.0	1125.6	1142.3	1159.0	1184.3	1209.7	1266.2	1322.7	1453.0	1583.4
35°	1048.9	1051.0	1053.2	1065.5	1077.8	1096.7	1115.5	1158.2	1201.0	1303.8	1406.7
37.5°	988.0	990.9	993.8	1001.0	1008.3	1024.9	1041.6	1075.7	1109.7	1188.7	1267.6
40°	928.6	933.7	938.8	943.8	948.9	962.7	976.4	1002.5	1028.6	1093.8	1159.0
42.5°	877.9	883.0	888.0	890.2	892.4	900.4	908.3	932.2	956.1	1004.7	1053.2
45°	828.7	830.8	833.0	835.2	837.3	843.9	850.4	871.4	892.4	934.4	976.4
47.5°	783.7	783.7	783.7	785.2	786.6	792.4	798.2	813.4	828.7	861.2	893.8
50°	740.3	740.3	740.3	738.1	735.9	739.6	743.2	754.8	766.4	795.3	824.3
52.5°	688.1	688.1	688.1	688.9	689.6	689.6	689.6	699.7	709.9	735.9	762.0
55°	636.0	638.9	641.8	639.6	637.4	638.9	640.3	646.8	653.4	674.4	695.4
57.5°	583.8	585.3	586.7	586.0	585.3	586.0	586.7	592.5	598.3	614.2	630.2
60°	534.6	534.6	534.6	533.1	531.7	533.1	534.6	537.5	540.4	554.8	569.3
62.5°	479.5	480.2	481.0	481.7	482.4	481.0	479.5	483.1	486.8	497.6	508.5
65°	424.5	425.2	425.9	428.1	430.3	428.8	427.4	431.0	434.6	442.6	450.5
67.5°	375.2	373.8	372.3	373.0	373.8	375.9	378.1	378.8	379.6	388.2	396.9
70°	317.3	318.7	320.2	319.4	318.7	319.4	320.2	322.3	324.5	331.0	337.5
72.5°	265.1	265.8	266.6	266.6	266.6	268.0	269.5	271.6	273.8	277.4	281.0
75°	217.3	217.3	217.3	218.8	220.2	220.9	221.6	221.6	221.6	224.5	227.4
77.5°	165.2	168.8	172.4	171.7	170.9	172.4	173.8	176.0	178.2	179.6	181.1
80°	120.2	120.2	120.2	121.0	121.7	123.9	126.0	127.5	128.9	131.8	134.7
82.5°	76.8	77.5	78.2	80.4	82.6	84.0	85.5	87.6	89.8	89.8	89.8
85°	47.8	46.4	44.9	46.4	47.8	49.3	50.7	51.4	52.2	53.6	55.1
87.5°	23.2	23.2	23.2	23.2	23.2	23.9	24.6	24.6	24.6	24.6	24.6
90°	15.6	16.1	15.6	15.1	15.6	14.5	14.0	13.4	12.9	13.4	11.8
92.5°	28.5	29.6	29.0	31.2	32.3	36.0	41.4	53.2	74.7	100.0	110.7
95°	62.4	64.5	68.3	73.1	83.3	102.7	131.2	193.5	258.6	318.8	283.9
97.5°	127.9	133.9	146.8	167.2	203.2	264.5	335.5	444.6	507.0	490.3	366.1
100°	337.1	336.5	357.5	396.8	451.0	527.4	590.3	633.8	615.0	509.1	344.1
102.5°	533.8	549.4	566.1	595.1	634.4	675.8	705.9	696.7	620.4	474.2	311.8
105°	683.8	686.5	703.7	724.1	748.9	762.9	752.6	698.9	586.5	432.2	286.5
107.5°	781.7	787.6	794.6	804.3	807.5	793.0	751.0	666.6	538.1	395.1	268.3
110°	837.6	838.7	839.7	835.4	820.4	782.7	715.0	616.1	493.0	364.5	258.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	848.9	848.3	843.0	827.4	796.7	745.7	667.7	566.1	453.7	344.1	253.2
115°	831.7	829.0	818.2	794.6	754.3	695.7	616.6	523.1	423.6	330.6	252.7
117.5°	794.0	790.3	774.1	747.8	705.9	645.1	572.5	489.8	403.7	321.5	253.2
120°	744.6	741.4	728.5	698.3	655.9	601.6	537.1	464.5	388.7	315.6	255.4
122.5°	698.3	694.0	679.5	653.2	616.6	567.2	508.6	444.6	376.3	311.8	259.1
125°	655.9	652.1	638.7	615.0	580.6	537.6	486.0	427.4	366.1	308.6	262.9
127.5°	619.3	616.1	603.7	583.3	552.1	512.3	465.0	411.8	356.4	307.0	267.2
130°	589.2	584.9	573.6	554.3	525.8	489.2	445.7	397.3	348.9	305.4	271.5
132.5°	559.6	557.0	547.3	527.9	501.6	467.2	427.4	383.8	341.9	304.8	274.7
135°	531.7	527.9	518.2	502.1	475.8	445.1	410.2	372.0	336.0	304.3	277.9
137.5°	502.1	498.9	490.8	474.2	451.6	424.2	393.0	360.7	330.6	303.2	280.1
140°	470.9	471.5	462.9	447.8	427.4	404.3	378.5	351.1	325.8	302.7	282.2
142.5°	441.9	442.4	434.9	422.0	405.4	386.0	364.5	341.9	321.5	301.6	283.9
145°	415.6	414.5	410.2	398.9	385.5	369.9	352.7	334.9	317.7	300.5	284.4
147.5°	393.0	392.4	388.1	380.1	369.3	358.0	343.5	329.0	314.0	298.9	284.4
150°	373.6	373.6	370.4	364.5	356.4	346.2	334.9	322.6	310.2	296.8	284.4
152.5°	357.5	357.5	355.9	350.5	344.6	336.5	326.9	316.6	305.9	294.1	282.8
155°	344.6	344.1	343.0	338.7	333.9	327.4	319.3	310.7	301.6	290.8	281.7
157.5°	332.2	332.2	331.2	327.9	323.6	318.3	311.8	304.3	296.8	288.2	280.1
160°	320.4	320.9	320.9	317.7	314.0	310.2	304.8	298.9	291.9	284.9	279.0
162.5°	309.7	310.2	310.2	307.5	305.4	302.1	297.3	292.5	287.1	281.7	276.9
165°	300.5	300.5	301.1	298.9	296.8	294.1	290.3	287.1	282.8	278.5	274.7
167.5°	291.4	291.4	291.9	290.3	289.2	287.1	284.9	282.2	278.5	275.3	272.6
170°	283.3	283.3	283.9	282.8	282.2	281.2	279.0	277.4	274.7	272.0	270.4
172.5°	275.8	276.3	277.4	276.3	276.3	275.8	274.2	273.1	271.0	269.3	268.8
175°	270.4	271.0	271.5	271.0	271.0	271.0	269.9	269.3	268.3	267.2	267.2
177.5°	266.7	266.7	267.7	267.2	267.7	267.7	267.2	266.7	266.1	265.6	266.1
180°	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	3121.9	3121.9	3121.9	3121.9	3121.9	3121.9	3121.9	3121.9	3121.9	3121.9	3121.9
2.5°	3339.2	3330.5	3298.7	3266.8	3230.6	3194.4	3167.6	3140.8	3100.9	3061.1	3028.5
5°	3618.8	3578.3	3510.9	3443.5	3352.3	3261.0	3199.4	3137.9	3055.3	2972.7	2906.8
7.5°	3840.5	3770.9	3676.8	3582.6	3463.1	3343.6	3230.6	3117.6	2991.5	2865.5	2762.7
10°	3981.7	3934.6	3826.0	3717.3	3557.3	3397.2	3239.3	3081.4	2919.1	2756.9	2620.7
12.5°	3995.5	3999.8	3899.9	3799.9	3618.8	3437.7	3245.8	3053.8	2849.6	2645.3	2486.7
15°	3874.5	3949.1	3894.1	3839.0	3656.5	3474.0	3237.8	3001.7	2766.3	2530.9	2347.6
17.5°	3650.0	3810.1	3818.0	3826.0	3643.5	3460.9	3199.4	2937.9	2671.4	2404.8	2212.2
20°	3343.6	3579.7	3660.8	3742.0	3593.5	3445.0	3163.9	2882.9	2584.5	2286.0	2083.9
22.5°	3030.7	3317.5	3466.0	3614.5	3504.4	3394.3	3095.1	2796.0	2480.9	2165.8	1960.8
25°	2674.3	2987.2	3215.4	3443.5	3376.2	3308.8	3014.0	2719.2	2383.8	2048.4	1839.1
27.5°	2363.5	2681.5	2956.8	3232.0	3217.5	3203.1	2910.4	2617.8	2274.4	1931.1	1729.0
30°	2086.8	2383.1	2690.9	2998.8	3034.3	3069.8	2787.3	2504.8	2160.7	1816.7	1621.8
32.5°	1842.0	2100.6	2430.9	2761.2	2830.7	2900.3	2645.3	2390.3	2049.9	1709.5	1521.8
35°	1641.4	1876.1	2206.4	2536.7	2623.6	2710.5	2488.9	2267.2	1935.5	1603.7	1424.8
37.5°	1463.9	1660.2	1982.5	2304.9	2411.3	2517.8	2319.4	2120.9	1810.1	1499.4	1335.0
40°	1316.9	1474.8	1771.0	2067.3	2190.4	2313.6	2149.9	1986.2	1691.3	1396.5	1245.1
42.5°	1193.7	1334.2	1603.0	1871.7	1989.8	2107.8	1969.5	1831.1	1568.9	1306.7	1168.4
45°	1088.7	1201.0	1445.1	1689.2	1801.4	1913.7	1794.9	1676.1	1445.1	1214.0	1085.1
47.5°	990.2	1086.5	1295.1	1503.7	1603.7	1703.7	1610.9	1518.2	1322.7	1127.1	1010.5
50°	901.8	979.3	1161.9	1344.4	1431.3	1518.2	1436.4	1354.5	1193.7	1032.9	931.5
52.5°	825.0	888.0	1040.9	1193.7	1268.3	1342.9	1272.7	1202.4	1074.9	947.4	859.1
55°	749.0	802.6	935.1	1067.7	1118.4	1169.1	1114.8	1060.4	957.6	854.7	780.1
57.5°	678.0	725.8	834.4	943.1	982.2	1021.3	972.1	922.8	845.3	767.8	705.5
60°	608.5	647.6	738.1	828.7	852.6	876.5	836.6	796.8	742.5	688.1	632.4
62.5°	544.0	579.5	646.8	714.2	730.1	746.1	715.7	685.2	643.9	602.7	559.2
65°	477.3	504.1	559.2	614.2	624.4	634.5	607.7	580.9	549.8	518.6	486.8
67.5°	415.8	434.6	479.5	524.4	525.2	525.9	504.1	482.4	465.0	447.6	422.3
70°	355.7	373.8	403.5	433.2	433.9	434.6	417.2	399.8	386.8	373.8	354.9
72.5°	294.1	307.1	329.6	352.0	350.6	349.1	338.3	327.4	317.3	307.1	293.4
75°	238.3	249.2	264.4	279.6	275.3	270.9	265.1	259.3	250.6	241.9	233.2
77.5°	187.6	194.1	202.8	211.5	208.6	205.7	200.6	195.6	189.1	182.5	178.9
80°	137.6	140.5	146.3	152.1	150.7	149.2	143.4	137.6	136.2	134.7	129.7
82.5°	93.4	97.1	98.5	100.0	99.2	98.5	94.2	89.8	88.4	86.9	86.2
85°	55.8	56.5	57.2	57.9	55.8	53.6	52.2	50.7	50.7	50.7	50.0
87.5°	25.4	26.1	26.1	26.1	25.4	24.6	23.2	21.7	22.5	23.2	23.2
90°	10.2	8.6	7.0	5.9	4.8	3.2	2.2	1.1	2.2	3.2	4.8
92.5°	82.8	54.3	37.1	27.4	22.0	17.2	11.8	8.1	11.8	17.2	22.0
95°	195.7	115.6	69.9	48.9	34.9	25.8	19.9	18.3	19.9	25.8	34.9
97.5°	217.7	124.7	79.6	56.4	42.5	34.4	29.6	29.0	29.6	34.4	42.5
100°	202.7	123.1	85.5	64.5	51.6	44.1	40.3	39.8	40.3	44.1	51.6
102.5°	189.8	125.3	92.5	73.7	62.4	55.4	52.1	51.1	52.1	55.4	62.4
105°	184.9	129.6	100.5	83.9	73.7	67.2	64.0	62.4	64.0	67.2	73.7
107.5°	183.9	136.6	110.7	95.2	85.5	79.0	75.8	74.2	75.8	79.0	85.5
110°	186.5	145.7	121.5	106.4	97.3	91.4	88.7	87.1	88.7	91.4	97.3





TEST NUMBER: P831263

CATALOG NUMBER: S123DIP-S1165D585U830-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	191.9	154.8	132.8	118.3	109.1	103.2	100.5	98.9	100.5	103.2	109.1
115°	197.8	165.0	144.6	130.1	121.0	115.6	112.4	110.2	112.4	115.6	121.0
117.5°	205.4	175.8	155.4	141.9	131.7	126.9	124.2	121.5	124.2	126.9	131.7
120°	214.0	186.0	166.7	153.2	143.0	137.6	134.9	133.3	134.9	137.6	143.0
122.5°	222.0	196.8	177.9	163.4	153.8	147.8	145.2	143.5	145.2	147.8	153.8
125°	230.6	207.0	188.2	173.6	163.4	157.5	154.3	153.2	154.3	157.5	163.4
127.5°	237.6	216.1	197.8	183.3	172.0	166.1	162.4	160.7	162.4	166.1	172.0
130°	244.6	224.2	206.4	191.9	180.6	174.2	169.3	167.7	169.3	174.2	180.6
132.5°	251.1	231.2	214.0	200.0	188.7	180.6	175.3	173.1	175.3	180.6	188.7
135°	256.4	238.2	221.5	207.0	195.7	187.6	181.7	179.6	181.7	187.6	195.7
137.5°	260.7	243.0	226.9	213.4	202.1	193.5	187.6	185.5	187.6	193.5	202.1
140°	264.0	247.8	232.2	218.8	208.1	199.5	194.1	191.4	194.1	199.5	208.1
142.5°	267.2	251.6	236.5	224.2	213.4	205.9	200.0	197.8	200.0	205.9	213.4
145°	269.3	254.8	240.8	228.5	219.3	211.3	206.4	204.8	206.4	211.3	219.3
147.5°	271.0	257.5	244.6	233.9	224.7	217.7	212.9	211.8	212.9	217.7	224.7
150°	271.5	260.2	247.8	238.2	230.6	223.6	219.3	218.8	219.3	223.6	230.6
152.5°	272.6	261.8	251.6	242.5	236.0	230.1	225.8	225.8	225.8	230.1	236.0
155°	272.6	264.0	254.8	247.3	241.4	236.0	232.8	232.8	232.8	236.0	241.4
157.5°	273.1	265.0	257.5	251.6	246.2	241.4	238.7	238.2	238.7	241.4	246.2
160°	273.1	266.7	260.2	254.8	251.1	246.8	244.6	244.6	244.6	246.8	251.1
162.5°	272.6	267.2	261.8	257.5	254.3	251.1	249.4	249.4	249.4	251.1	254.3
165°	271.5	267.7	263.4	259.7	257.5	254.8	253.7	254.3	253.7	254.8	257.5
167.5°	271.0	267.7	264.5	261.8	260.2	258.0	257.5	258.0	257.5	258.0	260.2
170°	269.3	267.2	264.5	263.4	262.3	260.7	260.2	261.3	260.2	260.7	262.3
172.5°	268.8	267.2	265.0	264.5	264.0	262.9	262.9	263.4	262.9	262.9	264.0
175°	267.7	266.7	265.6	265.0	265.0	264.0	264.5	265.0	264.5	264.0	265.0
177.5°	267.2	266.1	265.6	265.6	265.6	265.0	265.6	266.1	265.6	265.0	265.6
180°	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6



TEST NUMBER: P831263

CATALOG NUMBER: S123DIP-S1165D585U830-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	3121.9	3121.9	3121.9	3121.9	3121.9	3121.9	3121.9	3121.9	3121.9	3121.9	3121.9
2.5°	2995.9	2967.6	2939.4	2917.7	2895.9	2859.0	2822.0	2813.4	2804.7	2792.4	2780.0
5°	2840.9	2771.3	2701.8	2639.5	2577.2	2528.7	2480.2	2448.3	2416.4	2393.2	2370.1
7.5°	2659.8	2555.5	2451.2	2377.3	2303.4	2233.2	2162.9	2140.4	2118.0	2087.6	2057.1
10°	2484.5	2369.3	2254.2	2157.8	2061.5	1992.7	1923.9	1896.3	1868.8	1830.4	1792.0
12.5°	2328.0	2202.0	2076.0	1978.9	1881.8	1815.2	1748.6	1708.7	1668.9	1647.2	1625.4
15°	2164.3	2029.6	1894.9	1805.1	1715.2	1655.1	1595.0	1560.2	1525.5	1504.5	1483.5
17.5°	2019.5	1886.2	1752.9	1666.7	1580.5	1525.5	1470.4	1440.0	1409.6	1393.6	1377.7
20°	1881.8	1751.5	1621.1	1537.1	1453.0	1408.1	1363.2	1343.7	1324.1	1311.1	1298.0
22.5°	1755.8	1627.6	1499.4	1427.7	1356.0	1319.8	1283.5	1269.8	1256.0	1245.1	1234.3
25°	1629.8	1515.3	1400.9	1340.0	1279.2	1249.5	1219.8	1206.0	1192.3	1181.4	1170.5
27.5°	1526.9	1417.5	1308.2	1256.0	1203.9	1180.7	1157.5	1146.6	1135.8	1125.6	1115.5
30°	1427.0	1329.2	1231.4	1186.5	1141.6	1120.6	1099.6	1088.7	1077.8	1068.4	1059.0
32.5°	1334.2	1250.2	1166.2	1124.9	1083.6	1066.2	1048.9	1035.8	1022.8	1015.5	1008.3
35°	1245.9	1170.5	1095.2	1061.2	1027.1	1009.7	992.4	981.5	970.6	964.8	959.0
37.5°	1170.5	1103.2	1035.8	1003.2	970.6	954.0	937.3	927.9	918.5	916.3	914.1
40°	1093.8	1035.8	977.9	946.0	914.1	899.6	885.2	879.4	873.6	872.1	870.7
42.5°	1030.0	973.5	917.0	888.0	859.1	846.8	834.4	831.5	828.7	830.8	833.0
45°	956.1	909.1	862.0	835.2	808.4	798.2	788.1	785.9	783.7	788.1	792.4
47.5°	893.8	850.4	806.9	781.6	756.2	749.0	741.7	741.0	740.3	746.1	751.9
50°	830.1	788.1	746.1	725.8	705.5	699.0	692.5	694.6	696.8	706.2	715.7
52.5°	770.7	731.6	692.5	673.6	654.8	650.5	646.1	651.2	656.3	666.4	676.5
55°	705.5	670.0	634.5	620.0	605.6	601.2	596.9	607.0	617.1	626.6	636.0
57.5°	643.2	612.1	580.9	567.9	554.8	554.1	553.4	562.8	572.2	582.4	592.5
60°	576.6	550.5	524.4	514.3	504.1	505.6	507.0	517.9	528.8	536.7	544.7
62.5°	515.7	494.0	472.3	462.9	453.4	457.1	460.7	471.5	482.4	491.8	501.2
65°	454.9	436.8	418.7	412.2	405.6	410.7	415.8	425.2	434.6	441.1	447.6
67.5°	396.9	381.7	366.5	361.4	356.4	361.4	366.5	375.9	385.4	391.9	398.4
70°	336.1	323.8	311.5	307.8	304.2	310.0	315.8	323.8	331.8	338.3	344.8
72.5°	279.6	270.2	260.8	260.0	259.3	264.4	269.5	277.4	285.4	289.7	294.1
75°	224.5	219.5	214.4	213.7	213.0	218.0	223.1	227.4	231.8	235.4	239.0
77.5°	175.3	170.9	166.6	167.3	168.0	171.7	175.3	179.6	184.0	186.2	188.3
80°	124.6	123.1	121.7	123.1	124.6	127.5	130.4	133.3	136.2	137.6	139.1
82.5°	85.5	84.0	82.6	84.7	86.9	89.1	91.3	93.4	95.6	96.3	97.1
85°	49.3	51.4	53.6	53.6	53.6	54.3	55.1	55.8	56.5	55.8	55.1
87.5°	23.2	23.9	24.6	24.6	24.6	25.4	26.1	26.1	26.1	25.4	24.6
90°	5.9	7.0	8.6	10.2	11.8	13.4	12.9	13.4	14.0	14.5	15.6
92.5°	27.4	37.1	54.3	82.8	110.7	100.0	74.7	53.2	41.4	36.0	32.3
95°	48.9	69.9	115.6	195.7	283.9	318.8	258.6	193.5	131.2	102.7	83.3
97.5°	56.4	79.6	124.7	217.7	366.1	490.3	507.0	444.6	335.5	264.5	203.2
100°	64.5	85.5	123.1	202.7	344.1	509.1	615.0	633.8	590.3	527.4	451.0
102.5°	73.7	92.5	125.3	189.8	311.8	474.2	620.4	696.7	705.9	675.8	634.4
105°	83.9	100.5	129.6	184.9	286.5	432.2	586.5	698.9	752.6	762.9	748.9
107.5°	95.2	110.7	136.6	183.9	268.3	395.1	538.1	666.6	751.0	793.0	807.5
110°	106.4	121.5	145.7	186.5	258.6	364.5	493.0	616.1	715.0	782.7	820.4



TEST NUMBER: P831263

CATALOG NUMBER: S123DIP-S1165D585U830-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	118.3	132.8	154.8	191.9	253.2	344.1	453.7	566.1	667.7	745.7	796.7
115°	130.1	144.6	165.0	197.8	252.7	330.6	423.6	523.1	616.6	695.7	754.3
117.5°	141.9	155.4	175.8	205.4	253.2	321.5	403.7	489.8	572.5	645.1	705.9
120°	153.2	166.7	186.0	214.0	255.4	315.6	388.7	464.5	537.1	601.6	655.9
122.5°	163.4	177.9	196.8	222.0	259.1	311.8	376.3	444.6	508.6	567.2	616.6
125°	173.6	188.2	207.0	230.6	262.9	308.6	366.1	427.4	486.0	537.6	580.6
127.5°	183.3	197.8	216.1	237.6	267.2	307.0	356.4	411.8	465.0	512.3	552.1
130°	191.9	206.4	224.2	244.6	271.5	305.4	348.9	397.3	445.7	489.2	525.8
132.5°	200.0	214.0	231.2	251.1	274.7	304.8	341.9	383.8	427.4	467.2	501.6
135°	207.0	221.5	238.2	256.4	277.9	304.3	336.0	372.0	410.2	445.1	475.8
137.5°	213.4	226.9	243.0	260.7	280.1	303.2	330.6	360.7	393.0	424.2	451.6
140°	218.8	232.2	247.8	264.0	282.2	302.7	325.8	351.1	378.5	404.3	427.4
142.5°	224.2	236.5	251.6	267.2	283.9	301.6	321.5	341.9	364.5	386.0	405.4
145°	228.5	240.8	254.8	269.3	284.4	300.5	317.7	334.9	352.7	369.9	385.5
147.5°	233.9	244.6	257.5	271.0	284.4	298.9	314.0	329.0	343.5	358.0	369.3
150°	238.2	247.8	260.2	271.5	284.4	296.8	310.2	322.6	334.9	346.2	356.4
152.5°	242.5	251.6	261.8	272.6	282.8	294.1	305.9	316.6	326.9	336.5	344.6
155°	247.3	254.8	264.0	272.6	281.7	290.8	301.6	310.7	319.3	327.4	333.9
157.5°	251.6	257.5	265.0	273.1	280.1	288.2	296.8	304.3	311.8	318.3	323.6
160°	254.8	260.2	266.7	273.1	279.0	284.9	291.9	298.9	304.8	310.2	314.0
162.5°	257.5	261.8	267.2	272.6	276.9	281.7	287.1	292.5	297.3	302.1	305.4
165°	259.7	263.4	267.7	271.5	274.7	278.5	282.8	287.1	290.3	294.1	296.8
167.5°	261.8	264.5	267.7	271.0	272.6	275.3	278.5	282.2	284.9	287.1	289.2
170°	263.4	264.5	267.2	269.3	270.4	272.0	274.7	277.4	279.0	281.2	282.2
172.5°	264.5	265.0	267.2	268.8	268.8	269.3	271.0	273.1	274.2	275.8	276.3
175°	265.0	265.6	266.7	267.7	267.2	267.2	268.3	269.3	269.9	271.0	271.0
177.5°	265.6	265.6	266.1	267.2	266.1	265.6	266.1	266.7	267.2	267.7	267.7
180°	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6



TEST NUMBER: P831263

CATALOG NUMBER: S123DIP-S1165D585U830-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	3121.9	3121.9	3121.9	3121.9
2.5°	2775.0	2769.9	2749.6	2729.3
5°	2352.7	2335.3	2329.5	2323.7
7.5°	2055.7	2054.2	2023.8	1993.4
10°	1794.2	1796.4	1768.9	1741.3
12.5°	1607.3	1589.2	1587.0	1584.9
15°	1466.8	1450.1	1447.2	1444.3
17.5°	1367.6	1357.4	1354.5	1351.6
20°	1292.2	1286.4	1281.4	1276.3
22.5°	1227.0	1219.8	1215.5	1211.1
25°	1164.0	1157.5	1156.1	1154.6
27.5°	1107.5	1099.6	1099.6	1099.6
30°	1053.9	1048.9	1046.7	1044.5
32.5°	1003.9	999.6	999.6	999.6
35°	956.9	954.7	951.8	948.9
37.5°	914.1	914.1	912.7	911.2
40°	872.8	875.0	875.0	875.0
42.5°	835.2	837.3	837.3	837.3
45°	796.1	799.7	801.1	802.6
47.5°	757.7	763.5	764.9	766.4
50°	720.0	724.3	725.1	725.8
52.5°	681.6	686.7	690.3	693.9
55°	641.0	646.1	648.3	650.5
57.5°	597.6	602.7	603.4	604.1
60°	549.8	554.8	556.3	557.7
62.5°	504.1	507.0	508.5	509.9
65°	452.0	456.3	459.2	462.1
67.5°	402.0	405.6	405.6	405.6
70°	346.2	347.7	349.9	352.0
72.5°	294.8	295.5	295.5	295.5
75°	240.5	241.9	242.7	243.4
77.5°	189.1	189.8	189.8	189.8
80°	138.3	137.6	137.6	137.6
82.5°	94.9	92.7	92.7	92.7
85°	54.3	53.6	54.3	55.1
87.5°	24.6	24.6	24.6	24.6
90°	15.1	15.6	16.1	15.6
92.5°	31.2	29.0	29.6	28.5
95°	73.1	68.3	64.5	62.4
97.5°	167.2	146.8	133.9	127.9
100°	396.8	357.5	336.5	337.1
102.5°	595.1	566.1	549.4	533.8
105°	724.1	703.7	686.5	683.8
107.5°	804.3	794.6	787.6	781.7
110°	835.4	839.7	838.7	837.6



TEST NUMBER: P831263

CATALOG NUMBER: S123DIP-S1165D585U830-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	827.4	843.0	848.3	848.9
115°	794.6	818.2	829.0	831.7
117.5°	747.8	774.1	790.3	794.0
120°	698.3	728.5	741.4	744.6
122.5°	653.2	679.5	694.0	698.3
125°	615.0	638.7	652.1	655.9
127.5°	583.3	603.7	616.1	619.3
130°	554.3	573.6	584.9	589.2
132.5°	527.9	547.3	557.0	559.6
135°	502.1	518.2	527.9	531.7
137.5°	474.2	490.8	498.9	502.1
140°	447.8	462.9	471.5	470.9
142.5°	422.0	434.9	442.4	441.9
145°	398.9	410.2	414.5	415.6
147.5°	380.1	388.1	392.4	393.0
150°	364.5	370.4	373.6	373.6
152.5°	350.5	355.9	357.5	357.5
155°	338.7	343.0	344.1	344.6
157.5°	327.9	331.2	332.2	332.2
160°	317.7	320.9	320.9	320.4
162.5°	307.5	310.2	310.2	309.7
165°	298.9	301.1	300.5	300.5
167.5°	290.3	291.9	291.4	291.4
170°	282.8	283.9	283.3	283.3
172.5°	276.3	277.4	276.3	275.8
175°	271.0	271.5	271.0	270.4
177.5°	267.2	267.7	266.7	266.7
180°	265.6	265.6	265.6	265.6



TEST NUMBER: P831263

CATALOG NUMBER: S123DIP-S1165D585U830-4F0-1E-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	17.59	18.63	18.35	19.40	20.33	19.83	20.87	20.59	21.64	22.57
	3H	19.25	20.18	20.02	20.96	21.92	21.27	22.20	22.04	22.98	23.94
	4H	19.84	20.71	20.63	21.50	22.48	21.73	22.60	22.51	23.39	24.36
	6H	20.22	21.02	21.02	21.82	22.81	22.01	22.82	22.81	23.62	24.60
	8H	20.32	21.09	21.13	21.90	22.89	22.08	22.84	22.89	23.66	24.65
	12H	20.37	21.10	21.18	21.91	22.92	22.10	22.83	22.92	23.64	24.66
4H	2H	18.19	19.06	18.98	19.85	20.83	20.01	20.89	20.81	21.68	22.65
	3H	20.03	20.76	20.84	21.59	22.57	21.65	22.38	22.45	23.20	24.19
	4H	20.74	21.40	21.55	22.22	23.24	22.24	22.90	23.05	23.72	24.74
	6H	21.22	21.79	22.06	22.64	23.66	22.65	23.22	23.49	24.07	25.09
	8H	21.36	21.90	22.20	22.74	23.77	22.77	23.30	23.60	24.14	25.18
	12H	21.44	21.92	22.29	22.78	23.82	22.82	23.30	23.68	24.16	25.20
8H	4H	21.02	21.55	21.85	22.39	23.43	22.36	22.89	23.19	23.73	24.77
	6H	21.61	22.05	22.48	22.94	23.97	22.87	23.31	23.73	24.19	25.23
	8H	21.82	22.21	22.70	23.09	24.14	23.05	23.44	23.92	24.32	25.37
	12H	21.95	22.29	22.83	23.17	24.27	23.16	23.50	24.03	24.37	25.48
12H	4H	21.03	21.50	21.88	22.37	23.41	22.34	22.82	23.20	23.68	24.72
	6H	21.66	22.05	22.54	22.94	23.99	22.88	23.27	23.76	24.15	25.20
	8H	21.91	22.25	22.78	23.12	24.23	23.09	23.43	23.97	24.30	25.41