

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: P831277

Luminaire Tested: S123DIP-S1165D585U930-4F0-1E-UDD-G1

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831277  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 05/03/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S1165D585U930-4F0-1E-UDD-G1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1165 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: -

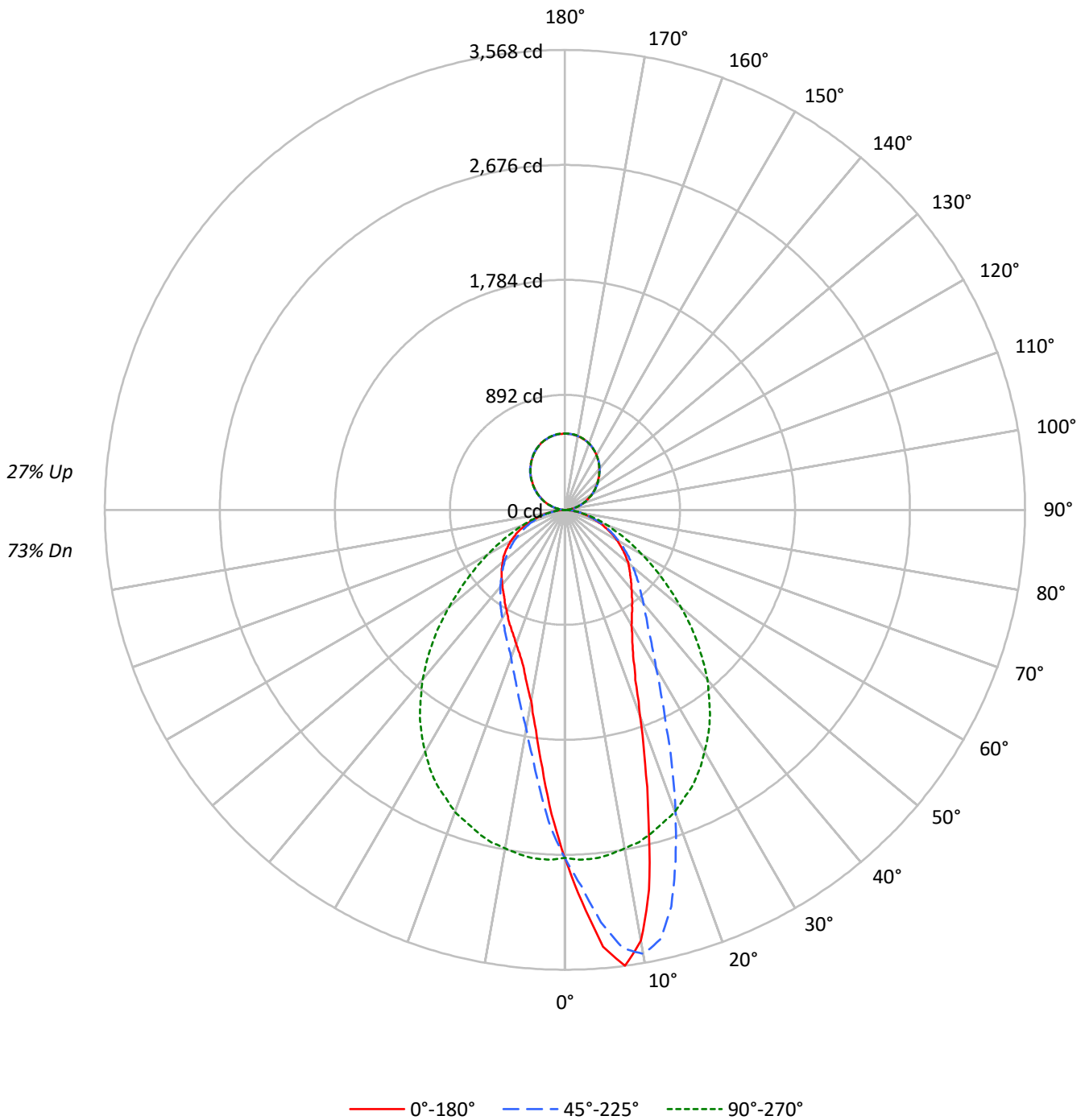
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5982.6 lumens  
Efficiency: N/A  
Efficacy: 104.2 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

TEST NUMBER: P831277

CATALOG NUMBER: S123DIP-S1165D585U930-4F0-1E-UDD-G1

### 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	113	113	113	113	107	107	107	107	96	96	96	86	86	86	77	77	77	77	77	77	73	
1	104	99	96	92	98	94	91	88	85	83	80	77	75	73	69	68	66	66	66	66	63	
2	95	88	82	77	90	84	78	74	76	72	68	69	65	62	62	59	57	57	57	57	54	
3	87	78	71	65	83	74	68	63	68	63	58	61	57	54	56	52	50	50	50	50	47	
4	80	70	62	56	76	67	60	54	61	55	51	55	51	47	50	47	44	44	44	44	41	
5	74	63	55	49	71	60	53	48	55	49	45	50	46	42	46	42	39	39	39	39	36	
6	69	57	49	43	65	55	47	42	50	44	40	46	41	37	42	38	35	35	35	35	32	
7	64	52	44	39	61	50	43	38	46	40	36	42	37	34	39	35	32	32	32	32	29	
8	60	48	40	35	57	46	39	34	43	37	32	39	34	30	36	32	29	29	29	29	27	
9	56	44	37	32	54	43	36	31	39	34	29	36	31	28	34	29	26	26	26	26	24	
10	53	41	34	29	50	39	33	28	37	31	27	34	29	26	32	27	24	24	24	24	23	

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

	0°	45°	90°	135°	180°
0°	29068	29068	29068	29068	29068
5°	36761	34696	29327	23634	21718
10°	37117	38241	29133	18840	16463
15°	27956	35504	28934	15954	13923
20°	19479	28730	28565	13952	12646
25°	14853	22094	27935	12836	11861
30°	12849	17554	26929	12048	11230
35°	11922	14820	25769	11477	10786
40°	11286	13294	24140	10935	10635
45°	10911	12304	22071	10511	10567
50°	10722	11521	19621	10124	10513
55°	10323	10946	17214	9758	10558
60°	9954	10331	14837	9414	10385
65°	9352	9750	12798	9049	10180
70°	8636	9010	10886	8441	9583
75°	7819	8077	9328	7844	8754
80°	6447	7067	7376	6837	7376
85°	5113	5730	5422	5805	5879

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 25199 cd/sqm



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CATALOG NUMBER: S123DIP-S1165D585U930-4F0-1E-UDD-G1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	255.3	4.3
10°-20°	635.1	10.6
20°-30°	752.0	12.6
30°-40°	756.1	12.6
40°-50°	693.7	11.6
50°-60°	572.6	9.6
60°-70°	405.0	6.8
70°-80°	216.2	3.6
80°-90°	56.1	0.9
90°-100°	38.1	0.6
100°-110°	115.3	1.9
110°-120°	196.4	3.3
120°-130°	258.3	4.3
130°-140°	290.4	4.9
140°-150°	285.5	4.8
150°-160°	240.3	4.0
160°-170°	160.0	2.7
170°-180°	56.0	0.9
0°-30°	1642.5	27.5
0°-40°	2398.6	40.1
0°-60°	3665.0	61.3
0°-90°	4342.3	72.6
90°-120°	349.8	5.8
90°-150°	1183.9	19.8
90°-180°	1640.0	27.4
0°-180°	5982.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2700	2700	2700	2700	2700	
5°	3402	3211	2714	2187	2010	324
15°	2509	3186	2596	1432	1249	693
25°	1251	1860	2352	1081	999	590
35°	907	1128	1961	873	821	570
45°	717	808	1450	690	694	555
55°	550	583	917	520	563	492
65°	367	383	502	355	400	365
75°	188	194	224	189	210	198
85°	41	46	44	47	48	46
90°	14	11	0	11	14	9
95°	36	34	27	34	36	36
105°	111	110	105	110	111	117
115°	198	198	198	198	198	196
125°	286	290	289	290	286	256
135°	375	378	375	378	375	288
145°	455	458	455	458	455	284
155°	520	522	521	522	520	240
165°	566	566	568	566	566	160
175°	588	589	591	589	588	56
180°	592	592	592	592	592	



TEST NUMBER: P831277

CATALOG NUMBER: S123DIP-S1165D585U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5
2.5°	3043.8	3040.7	3037.6	3021.9	3006.2	2998.7	2991.2	2968.6	2946.1	2921.0	2896.0
5°	3402.2	3411.0	3419.8	3409.7	3399.7	3369.0	3338.3	3297.6	3256.8	3211.1	3165.4
7.5°	3567.6	3572.6	3577.6	3571.4	3565.1	3557.0	3548.8	3512.5	3476.1	3429.2	3382.2
10°	3395.9	3407.2	3418.5	3442.9	3467.4	3494.9	3522.5	3517.5	3512.5	3498.7	3484.9
12.5°	3018.8	3032.5	3046.3	3095.2	3144.1	3206.7	3269.4	3323.3	3377.1	3414.7	3452.3
15°	2508.7	2547.0	2585.2	2629.7	2674.2	2766.3	2858.4	2971.8	3085.2	3186.0	3286.9
17.5°	2066.4	2080.8	2095.2	2142.8	2190.4	2306.4	2422.3	2553.2	2684.2	2851.5	3018.8
20°	1700.5	1713.6	1726.8	1789.5	1852.1	1943.0	2033.8	2181.0	2328.3	2508.1	2687.9
22.5°	1428.6	1449.2	1469.9	1505.0	1540.1	1627.2	1714.3	1845.2	1976.2	2174.8	2373.4
25°	1250.6	1265.6	1280.7	1302.0	1323.3	1392.8	1462.4	1570.2	1677.9	1860.3	2042.6
27.5°	1129.1	1135.3	1141.6	1162.9	1184.2	1229.3	1274.4	1367.1	1459.9	1614.6	1769.4
30°	1033.8	1038.2	1042.6	1061.4	1080.2	1110.9	1141.6	1208.6	1275.7	1412.3	1548.9
32.5°	967.4	970.5	973.7	988.1	1002.5	1024.4	1046.4	1095.2	1144.1	1256.9	1369.7
35°	907.3	909.1	911.0	921.7	932.3	948.6	964.9	1001.9	1038.8	1127.8	1216.8
37.5°	854.6	857.1	859.6	865.9	872.2	886.6	901.0	930.4	959.9	1028.2	1096.5
40°	803.2	807.6	812.0	816.4	820.8	832.7	844.6	867.2	889.7	946.1	1002.5
42.5°	759.4	763.8	768.2	770.0	771.9	778.8	785.7	806.4	827.1	869.0	911.0
45°	716.8	718.7	720.5	722.4	724.3	729.9	735.6	753.7	771.9	808.3	844.6
47.5°	677.9	677.9	677.9	679.2	680.4	685.5	690.5	703.6	716.8	745.0	773.2
50°	640.3	640.3	640.3	638.5	636.6	639.7	642.8	652.9	662.9	688.0	713.0
52.5°	595.2	595.2	595.2	595.9	596.5	596.5	596.5	605.3	614.0	636.6	659.1
55°	550.1	552.6	555.1	553.3	551.4	552.6	553.9	559.5	565.2	583.3	601.5
57.5°	505.0	506.3	507.5	506.9	506.3	506.9	507.5	512.5	517.5	531.3	545.1
60°	462.4	462.4	462.4	461.1	459.9	461.1	462.4	464.9	467.4	479.9	492.5
62.5°	414.8	415.4	416.0	416.7	417.3	416.0	414.8	417.9	421.0	430.4	439.8
65°	367.2	367.8	368.4	370.3	372.2	370.9	369.7	372.8	375.9	382.8	389.7
67.5°	324.6	323.3	322.1	322.7	323.3	325.2	327.1	327.7	328.3	335.8	343.4
70°	274.4	275.7	276.9	276.3	275.7	276.3	276.9	278.8	280.7	286.3	292.0
72.5°	229.3	229.9	230.6	230.6	230.6	231.8	233.1	235.0	236.8	240.0	243.1
75°	188.0	188.0	188.0	189.2	190.5	191.1	191.7	191.7	191.7	194.2	196.7
77.5°	142.9	146.0	149.1	148.5	147.9	149.1	150.4	152.3	154.1	155.4	156.6
80°	104.0	104.0	104.0	104.6	105.3	107.1	109.0	110.3	111.5	114.0	116.5
82.5°	66.4	67.0	67.7	69.5	71.4	72.7	73.9	75.8	77.7	77.7	77.7
85°	41.4	40.1	38.8	40.1	41.4	42.6	43.9	44.5	45.1	46.4	47.6
87.5°	20.0	20.0	20.0	20.0	20.0	20.7	21.3	21.3	21.3	21.3	21.3
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°	20.0	20.2	20.4	20.6	20.8	20.8	20.5	20.2	19.8	19.5	18.9
95°	36.3	36.3	36.3	36.3	36.3	36.1	35.7	35.2	34.8	34.4	33.6
97.5°	52.1	52.2	52.3	52.4	52.5	52.3	51.8	51.3	50.7	50.2	49.6
100°	70.7	70.5	70.3	70.1	69.9	69.6	69.3	69.0	68.7	68.4	67.8
102.5°	89.8	89.9	90.0	90.1	90.2	90.1	89.8	89.4	89.1	88.8	88.1
105°	110.7	110.5	110.3	110.1	109.9	109.7	109.7	109.7	109.7	109.7	108.8
107.5°	132.1	132.2	132.3	132.4	132.5	132.4	132.1	131.8	131.5	131.1	130.7
110°	153.9	154.1	154.3	154.5	154.8	154.7	154.2	153.8	153.4	153.0	152.8



TEST NUMBER: P831277

CATALOG NUMBER: S123DIP-S1165D585U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	177.2	177.2	177.2	177.2	177.2	176.9	176.4	175.9	175.4	174.9	174.9
115°	198.1	198.2	198.3	198.4	198.5	198.5	198.4	198.3	198.2	198.1	198.3
117.5°	219.5	219.8	220.1	220.4	220.7	220.9	220.9	220.9	220.9	220.9	221.1
120°	242.3	242.5	242.7	242.9	243.1	243.3	243.4	243.5	243.6	243.7	244.2
122.5°	264.1	264.5	264.8	265.1	265.4	265.7	266.0	266.3	266.6	266.9	267.1
125°	286.0	286.4	286.8	287.2	287.7	288.1	288.5	288.9	289.3	289.7	289.9
127.5°	307.9	308.3	308.7	309.1	309.5	310.0	310.6	311.3	311.9	312.5	312.7
130°	329.2	330.0	330.7	331.4	332.1	332.7	333.1	333.5	333.9	334.4	334.7
132.5°	351.6	352.1	352.6	353.1	353.6	354.2	354.7	355.2	355.7	356.2	356.4
135°	374.8	375.0	375.2	375.4	375.6	376.0	376.4	376.8	377.2	377.6	377.7
137.5°	395.3	395.6	395.9	396.2	396.5	396.9	397.5	398.0	398.5	399.0	398.7
140°	415.3	416.0	416.7	417.4	418.2	418.6	418.7	418.8	418.9	419.0	418.9
142.5°	435.7	436.3	436.8	437.3	437.8	438.1	438.2	438.3	438.4	438.5	438.3
145°	455.3	455.7	456.1	456.5	456.9	457.2	457.3	457.4	457.5	457.6	457.3
147.5°	472.9	473.6	474.2	474.8	475.4	475.7	475.7	475.7	475.7	475.7	475.4
150°	489.7	490.3	490.9	491.5	492.2	492.5	492.5	492.5	492.5	492.5	492.3
152.5°	506.0	506.5	507.0	507.5	508.0	508.2	508.0	507.8	507.6	507.4	507.3
155°	520.4	521.1	521.8	522.5	523.3	523.4	523.0	522.6	522.2	521.8	521.7
157.5°	533.9	534.5	535.1	535.7	536.3	536.4	536.0	535.6	535.2	534.8	534.7
160°	546.9	547.3	547.7	548.1	548.5	548.5	548.0	547.5	546.9	546.4	546.4
162.5°	556.7	557.4	558.1	558.8	559.5	559.6	559.1	558.6	558.1	557.6	557.5
165°	566.0	566.7	567.4	568.1	568.8	568.9	568.3	567.7	567.0	566.4	566.4
167.5°	574.3	574.9	575.6	576.2	576.8	576.8	576.2	575.6	574.9	574.3	574.2
170°	580.4	581.1	581.8	582.5	583.3	583.3	582.5	581.8	581.1	580.4	580.4
172.5°	585.0	585.7	586.5	587.2	587.9	588.0	587.3	586.7	586.1	585.5	585.5
175°	588.3	589.0	589.7	590.4	591.2	591.2	590.6	590.0	589.4	588.7	588.7
177.5°	590.1	590.9	591.6	592.3	593.0	593.1	592.5	591.8	591.2	590.6	590.6
180°	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0



TEST NUMBER: P831277

CATALOG NUMBER: S123DIP-S1165D585U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5
2.5°	2888.4	2880.9	2853.3	2825.8	2794.4	2763.1	2739.9	2716.8	2682.3	2647.8	2619.6
5°	3130.3	3095.2	3036.9	2978.7	2899.7	2820.8	2767.5	2714.2	2642.8	2571.4	2514.4
7.5°	3322.0	3261.9	3180.4	3099.0	2995.6	2892.2	2794.4	2696.7	2587.7	2478.7	2389.7
10°	3444.2	3403.5	3309.5	3215.5	3077.0	2938.6	2802.0	2665.4	2525.0	2384.7	2266.9
12.5°	3456.1	3459.9	3373.4	3286.9	3130.3	2973.6	2807.6	2641.6	2464.9	2288.2	2151.0
15°	3351.5	3416.0	3368.4	3320.8	3162.9	3005.0	2800.7	2596.5	2392.8	2189.2	2030.7
17.5°	3157.2	3295.7	3302.6	3309.5	3151.6	2993.7	2767.5	2541.3	2310.7	2080.2	1913.5
20°	2892.2	3096.5	3166.6	3236.8	3108.4	2979.9	2736.8	2493.7	2235.6	1977.4	1802.6
22.5°	2621.5	2869.6	2998.1	3126.5	3031.3	2936.1	2677.3	2418.5	2146.0	1873.4	1696.1
25°	2313.3	2583.9	2781.3	2978.7	2920.4	2862.1	2607.1	2352.1	2062.0	1771.9	1590.8
27.5°	2044.5	2319.5	2557.6	2795.7	2783.2	2770.6	2517.5	2264.4	1967.4	1670.4	1495.6
30°	1805.1	2061.4	2327.7	2594.0	2624.7	2655.4	2411.0	2166.6	1869.0	1571.4	1402.9
32.5°	1593.3	1817.0	2102.7	2388.4	2448.6	2508.7	2288.2	2067.6	1773.2	1478.7	1316.4
35°	1419.8	1622.8	1908.5	2194.2	2269.4	2344.6	2152.9	1961.1	1674.2	1387.2	1232.4
37.5°	1266.3	1436.1	1714.9	1993.7	2085.8	2177.9	2006.2	1834.6	1565.8	1297.0	1154.7
40°	1139.1	1275.7	1531.9	1788.2	1894.7	2001.2	1859.6	1718.0	1463.0	1208.0	1077.1
42.5°	1032.6	1154.1	1386.6	1619.0	1721.2	1823.3	1703.6	1583.9	1357.1	1130.3	1010.6
45°	941.7	1038.8	1250.0	1461.1	1558.3	1655.4	1552.6	1449.9	1250.0	1050.1	938.6
47.5°	856.5	939.8	1120.3	1300.7	1387.2	1473.7	1393.5	1313.3	1144.1	974.9	874.0
50°	780.1	847.1	1005.0	1162.9	1238.1	1313.3	1242.5	1171.7	1032.6	893.5	805.8
52.5°	713.6	768.2	900.4	1032.6	1097.1	1161.6	1100.9	1040.1	929.8	819.5	743.1
55°	647.9	694.2	808.9	923.5	967.4	1011.3	964.3	917.3	828.3	739.3	674.8
57.5°	586.5	627.8	721.8	815.8	849.6	883.4	840.8	798.2	731.2	664.2	610.3
60°	526.3	560.1	638.5	716.8	737.5	758.1	723.7	689.2	642.2	595.2	547.0
62.5°	470.5	501.2	559.5	617.8	631.6	645.4	619.0	592.7	557.0	521.3	483.7
65°	412.9	436.1	483.7	531.3	540.1	548.9	525.7	502.5	475.6	448.6	421.0
67.5°	359.6	375.9	414.8	453.6	454.3	454.9	436.1	417.3	402.3	387.2	365.3
70°	307.6	323.3	349.0	374.7	375.3	375.9	360.9	345.9	334.6	323.3	307.0
72.5°	254.4	265.7	285.1	304.5	303.3	302.0	292.6	283.2	274.4	265.7	253.8
75°	206.1	215.5	228.7	241.9	238.1	234.3	229.3	224.3	216.8	209.3	201.8
77.5°	162.3	167.9	175.4	183.0	180.4	177.9	173.6	169.2	163.5	157.9	154.8
80°	119.0	121.6	126.6	131.6	130.3	129.1	124.1	119.0	117.8	116.5	112.2
82.5°	80.8	84.0	85.2	86.5	85.8	85.2	81.5	77.7	76.4	75.2	74.6
85°	48.2	48.9	49.5	50.1	48.2	46.4	45.1	43.9	43.9	43.9	43.2
87.5°	21.9	22.6	22.6	22.6	21.9	21.3	20.0	18.8	19.4	20.0	20.0
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°	18.3	17.7	17.1	16.4	15.8	15.2	14.6	14.0	14.6	15.2	15.8
95°	32.8	31.9	31.1	30.3	29.6	28.9	28.2	27.4	28.2	28.9	29.6
97.5°	49.0	48.4	47.7	47.2	46.7	46.1	45.6	45.1	45.6	46.1	46.7
100°	67.3	66.8	66.3	65.7	65.1	64.5	63.9	63.2	63.9	64.5	65.1
102.5°	87.4	86.7	85.9	85.4	85.1	84.8	84.5	84.2	84.5	84.8	85.1
105°	107.9	107.0	106.0	105.5	105.3	105.0	104.8	104.6	104.8	105.0	105.3
107.5°	130.3	129.9	129.5	129.2	129.1	129.0	128.9	128.8	128.9	129.0	129.1
110°	152.6	152.4	152.2	152.0	151.8	151.6	151.3	151.1	151.3	151.6	151.8





TEST NUMBER: P831277

CATALOG NUMBER: S123DIP-S1165D585U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	174.9	174.9	174.9	174.8	174.7	174.6	174.5	174.4	174.5	174.6	174.7
115°	198.5	198.7	198.9	198.9	198.6	198.3	198.0	197.6	198.0	198.3	198.6
117.5°	221.3	221.5	221.7	221.8	221.7	221.6	221.5	221.4	221.5	221.6	221.7
120°	244.7	245.2	245.7	245.7	245.1	244.5	243.8	243.2	243.8	244.5	245.1
122.5°	267.3	267.6	267.8	267.7	267.2	266.8	266.4	266.0	266.4	266.8	267.2
125°	290.1	290.3	290.5	290.5	290.2	289.9	289.6	289.3	289.6	289.9	290.2
127.5°	312.9	313.1	313.3	313.1	312.5	311.9	311.3	310.6	311.3	311.9	312.5
130°	335.0	335.3	335.6	335.3	334.5	333.7	332.9	332.0	332.9	333.7	334.5
132.5°	356.6	356.8	357.0	356.7	355.9	355.1	354.3	353.4	354.3	355.1	355.9
135°	377.8	377.9	378.0	377.8	377.1	376.5	375.9	375.3	375.9	376.5	377.1
137.5°	398.4	398.1	397.8	397.3	396.8	396.3	395.8	395.3	395.8	396.3	396.8
140°	418.8	418.7	418.6	418.3	417.8	417.2	416.7	416.2	416.7	417.2	417.8
142.5°	438.1	437.9	437.7	437.3	436.8	436.3	435.8	435.3	435.8	436.3	436.8
145°	457.0	456.7	456.4	456.1	455.9	455.7	455.5	455.3	455.5	455.7	455.9
147.5°	475.1	474.8	474.5	474.1	473.7	473.3	472.9	472.5	472.9	473.3	473.7
150°	492.1	491.9	491.6	491.4	491.2	491.0	490.8	490.6	490.8	491.0	491.2
152.5°	507.2	507.0	506.9	506.7	506.4	506.1	505.8	505.5	505.8	506.1	506.4
155°	521.6	521.5	521.4	521.3	521.3	521.3	521.3	521.3	521.3	521.3	521.3
157.5°	534.6	534.5	534.4	534.4	534.5	534.6	534.7	534.8	534.7	534.6	534.5
160°	546.4	546.4	546.4	546.5	546.7	546.9	547.1	547.4	547.1	546.9	546.7
162.5°	557.4	557.3	557.2	557.3	557.6	557.9	558.2	558.5	558.2	557.9	557.6
165°	566.4	566.4	566.4	566.6	566.9	567.2	567.5	567.8	567.5	567.2	566.9
167.5°	574.1	574.0	573.9	574.1	574.5	574.9	575.3	575.7	575.3	574.9	574.5
170°	580.4	580.4	580.4	580.6	581.0	581.4	581.8	582.2	581.8	581.4	581.0
172.5°	585.5	585.5	585.5	585.7	586.1	586.5	586.9	587.3	586.9	586.5	586.1
175°	588.7	588.7	588.7	588.9	589.4	589.8	590.2	590.6	590.2	589.8	589.4
177.5°	590.6	590.6	590.6	590.8	591.2	591.6	592.0	592.5	592.0	591.6	591.2
180°	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0



TEST NUMBER: P831277

CATALOG NUMBER: S123DIP-S1165D585U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5
2.5°	2591.4	2567.0	2542.6	2523.8	2505.0	2473.0	2441.1	2433.6	2426.0	2415.4	2404.7
5°	2457.4	2397.2	2337.1	2283.2	2229.3	2187.3	2145.3	2117.8	2090.2	2070.1	2050.1
7.5°	2300.7	2210.5	2120.3	2056.4	1992.5	1931.7	1870.9	1851.5	1832.1	1805.7	1779.4
10°	2149.1	2049.5	1949.8	1866.5	1783.2	1723.7	1664.1	1640.3	1616.5	1583.3	1550.1
12.5°	2013.8	1904.7	1795.7	1711.8	1627.8	1570.2	1512.5	1478.1	1443.6	1424.8	1406.0
15°	1872.2	1755.6	1639.1	1561.4	1483.7	1431.7	1379.7	1349.6	1319.5	1301.4	1283.2
17.5°	1746.8	1631.6	1516.3	1441.7	1367.1	1319.5	1271.9	1245.6	1219.3	1205.5	1191.7
20°	1627.8	1515.0	1402.2	1329.6	1256.9	1218.0	1179.2	1162.3	1145.3	1134.1	1122.8
22.5°	1518.8	1407.9	1297.0	1234.9	1172.9	1141.6	1110.3	1098.4	1086.5	1077.1	1067.7
25°	1409.8	1310.8	1211.8	1159.1	1106.5	1080.8	1055.1	1043.2	1031.3	1021.9	1012.5
27.5°	1320.8	1226.2	1131.6	1086.5	1041.3	1021.3	1001.2	991.8	982.4	973.7	964.9
30°	1234.3	1149.7	1065.1	1026.3	987.5	969.3	951.1	941.7	932.3	924.2	916.0
32.5°	1154.1	1081.4	1008.8	973.0	937.3	922.3	907.3	896.0	884.7	878.4	872.2
35°	1077.7	1012.5	947.4	917.9	888.5	873.4	858.4	849.0	839.6	834.6	829.6
37.5°	1012.5	954.2	896.0	867.8	839.6	825.2	810.8	802.6	794.5	792.6	790.7
40°	946.1	896.0	845.9	818.3	790.7	778.2	765.7	760.6	755.6	754.4	753.1
42.5°	891.0	842.1	793.2	768.2	743.1	732.4	721.8	719.3	716.8	718.7	720.5
45°	827.1	786.3	745.6	722.4	699.2	690.5	681.7	679.8	677.9	681.7	685.5
47.5°	773.2	735.6	698.0	676.1	654.1	647.9	641.6	641.0	640.3	645.4	650.4
50°	718.0	681.7	645.4	627.8	610.3	604.6	599.0	600.9	602.7	610.9	619.0
52.5°	666.7	632.8	599.0	582.7	566.4	562.6	558.9	563.3	567.7	576.4	585.2
55°	610.3	579.6	548.9	536.3	523.8	520.0	516.3	525.1	533.8	542.0	550.1
57.5°	556.4	529.4	502.5	491.2	479.9	479.3	478.7	486.8	495.0	503.8	512.5
60°	498.7	476.2	453.6	444.9	436.1	437.3	438.6	448.0	457.4	464.3	471.2
62.5°	446.1	427.3	408.5	400.4	392.2	395.4	398.5	407.9	417.3	425.4	433.6
65°	393.5	377.8	362.2	356.5	350.9	355.3	359.6	367.8	375.9	381.6	387.2
67.5°	343.4	330.2	317.0	312.7	308.3	312.7	317.0	325.2	333.3	339.0	344.6
70°	290.7	280.1	269.4	266.3	263.2	268.2	273.2	280.1	287.0	292.6	298.2
72.5°	241.9	233.7	225.6	224.9	224.3	228.7	233.1	240.0	246.9	250.6	254.4
75°	194.2	189.8	185.5	184.8	184.2	188.6	193.0	196.7	200.5	203.6	206.8
77.5°	151.6	147.9	144.1	144.7	145.4	148.5	151.6	155.4	159.1	161.0	162.9
80°	107.8	106.5	105.3	106.5	107.8	110.3	112.8	115.3	117.8	119.0	120.3
82.5°	73.9	72.7	71.4	73.3	75.2	77.1	78.9	80.8	82.7	83.3	84.0
85°	42.6	44.5	46.4	46.4	46.4	47.0	47.6	48.2	48.9	48.2	47.6
87.5°	20.0	20.7	21.3	21.3	21.3	21.9	22.6	22.6	22.6	21.9	21.3
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°	16.4	17.1	17.7	18.3	18.9	19.5	19.8	20.2	20.5	20.8	20.8
95°	30.3	31.1	31.9	32.8	33.6	34.4	34.8	35.2	35.7	36.1	36.3
97.5°	47.2	47.7	48.4	49.0	49.6	50.2	50.7	51.3	51.8	52.3	52.5
100°	65.7	66.3	66.8	67.3	67.8	68.4	68.7	69.0	69.3	69.6	69.9
102.5°	85.4	85.9	86.7	87.4	88.1	88.8	89.1	89.4	89.8	90.1	90.2
105°	105.5	106.0	107.0	107.9	108.8	109.7	109.7	109.7	109.7	109.7	109.9
107.5°	129.2	129.5	129.9	130.3	130.7	131.1	131.5	131.8	132.1	132.4	132.5
110°	152.0	152.2	152.4	152.6	152.8	153.0	153.4	153.8	154.2	154.7	154.8



TEST NUMBER: P831277

CATALOG NUMBER: S123DIP-S1165D585U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	174.8	174.9	174.9	174.9	174.9	174.9	175.4	175.9	176.4	176.9	177.2
115°	198.9	198.9	198.7	198.5	198.3	198.1	198.2	198.3	198.4	198.5	198.5
117.5°	221.8	221.7	221.5	221.3	221.1	220.9	220.9	220.9	220.9	220.9	220.7
120°	245.7	245.7	245.2	244.7	244.2	243.7	243.6	243.5	243.4	243.3	243.1
122.5°	267.7	267.8	267.6	267.3	267.1	266.9	266.6	266.3	266.0	265.7	265.4
125°	290.5	290.5	290.3	290.1	289.9	289.7	289.3	288.9	288.5	288.1	287.7
127.5°	313.1	313.3	313.1	312.9	312.7	312.5	311.9	311.3	310.6	310.0	309.5
130°	335.3	335.6	335.3	335.0	334.7	334.4	333.9	333.5	333.1	332.7	332.1
132.5°	356.7	357.0	356.8	356.6	356.4	356.2	355.7	355.2	354.7	354.2	353.6
135°	377.8	378.0	377.9	377.8	377.7	377.6	377.2	376.8	376.4	376.0	375.6
137.5°	397.3	397.8	398.1	398.4	398.7	399.0	398.5	398.0	397.5	396.9	396.5
140°	418.3	418.6	418.7	418.8	418.9	419.0	418.9	418.8	418.7	418.6	418.2
142.5°	437.3	437.7	437.9	438.1	438.3	438.5	438.4	438.3	438.2	438.1	437.8
145°	456.1	456.4	456.7	457.0	457.3	457.6	457.5	457.4	457.3	457.2	456.9
147.5°	474.1	474.5	474.8	475.1	475.4	475.7	475.7	475.7	475.7	475.7	475.4
150°	491.4	491.6	491.9	492.1	492.3	492.5	492.5	492.5	492.5	492.5	492.2
152.5°	506.7	506.9	507.0	507.2	507.3	507.4	507.6	507.8	508.0	508.2	508.0
155°	521.3	521.4	521.5	521.6	521.7	521.8	522.2	522.6	523.0	523.4	523.3
157.5°	534.4	534.4	534.5	534.6	534.7	534.8	535.2	535.6	536.0	536.4	536.3
160°	546.5	546.4	546.4	546.4	546.4	546.4	546.9	547.5	548.0	548.5	548.5
162.5°	557.3	557.2	557.3	557.4	557.5	557.6	558.1	558.6	559.1	559.6	559.5
165°	566.6	566.4	566.4	566.4	566.4	566.4	567.0	567.7	568.3	568.9	568.8
167.5°	574.1	573.9	574.0	574.1	574.2	574.3	574.9	575.6	576.2	576.8	576.8
170°	580.6	580.4	580.4	580.4	580.4	580.4	581.1	581.8	582.5	583.3	583.3
172.5°	585.7	585.5	585.5	585.5	585.5	585.5	586.1	586.7	587.3	588.0	587.9
175°	588.9	588.7	588.7	588.7	588.7	588.7	589.4	590.0	590.6	591.2	591.2
177.5°	590.8	590.6	590.6	590.6	590.6	590.6	591.2	591.8	592.5	593.1	593.0
180°	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0



TEST NUMBER: P831277

CATALOG NUMBER: S123DIP-S1165D585U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	2700.5	2700.5	2700.5	2700.5
2.5°	2400.3	2396.0	2378.4	2360.9
5°	2035.1	2020.0	2015.0	2010.0
7.5°	1778.2	1776.9	1750.6	1724.3
10°	1552.0	1553.9	1530.1	1506.2
12.5°	1390.3	1374.7	1372.8	1370.9
15°	1268.8	1254.4	1251.9	1249.4
17.5°	1182.9	1174.2	1171.7	1169.2
20°	1117.8	1112.8	1108.4	1104.0
22.5°	1061.4	1055.1	1051.4	1047.6
25°	1006.9	1001.2	1000.0	998.7
27.5°	958.0	951.1	951.1	951.1
30°	911.6	907.3	905.4	903.5
32.5°	868.4	864.7	864.7	864.7
35°	827.7	825.8	823.3	820.8
37.5°	790.7	790.7	789.5	788.2
40°	755.0	756.9	756.9	756.9
42.5°	722.4	724.3	724.3	724.3
45°	688.6	691.7	693.0	694.2
47.5°	655.4	660.4	661.6	662.9
50°	622.8	626.6	627.2	627.8
52.5°	589.6	594.0	597.1	600.2
55°	554.5	558.9	560.8	562.6
57.5°	516.9	521.3	521.9	522.5
60°	475.6	479.9	481.2	482.4
62.5°	436.1	438.6	439.8	441.1
65°	391.0	394.7	397.2	399.7
67.5°	347.7	350.9	350.9	350.9
70°	299.5	300.7	302.6	304.5
72.5°	255.0	255.6	255.6	255.6
75°	208.0	209.3	209.9	210.5
77.5°	163.5	164.2	164.2	164.2
80°	119.7	119.0	119.0	119.0
82.5°	82.1	80.2	80.2	80.2
85°	47.0	46.4	47.0	47.6
87.5°	21.3	21.3	21.3	21.3
90°	13.3	13.5	13.7	14.0
92.5°	20.6	20.4	20.2	20.0
95°	36.3	36.3	36.3	36.3
97.5°	52.4	52.3	52.2	52.1
100°	70.1	70.3	70.5	70.7
102.5°	90.1	90.0	89.9	89.8
105°	110.1	110.3	110.5	110.7
107.5°	132.4	132.3	132.2	132.1
110°	154.5	154.3	154.1	153.9



TEST NUMBER: P831277

CATALOG NUMBER: S123DIP-S1165D585U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	177.2	177.2	177.2	177.2
115°	198.4	198.3	198.2	198.1
117.5°	220.4	220.1	219.8	219.5
120°	242.9	242.7	242.5	242.3
122.5°	265.1	264.8	264.5	264.1
125°	287.2	286.8	286.4	286.0
127.5°	309.1	308.7	308.3	307.9
130°	331.4	330.7	330.0	329.2
132.5°	353.1	352.6	352.1	351.6
135°	375.4	375.2	375.0	374.8
137.5°	396.2	395.9	395.6	395.3
140°	417.4	416.7	416.0	415.3
142.5°	437.3	436.8	436.3	435.7
145°	456.5	456.1	455.7	455.3
147.5°	474.8	474.2	473.6	472.9
150°	491.5	490.9	490.3	489.7
152.5°	507.5	507.0	506.5	506.0
155°	522.5	521.8	521.1	520.4
157.5°	535.7	535.1	534.5	533.9
160°	548.1	547.7	547.3	546.9
162.5°	558.8	558.1	557.4	556.7
165°	568.1	567.4	566.7	566.0
167.5°	576.2	575.6	574.9	574.3
170°	582.5	581.8	581.1	580.4
172.5°	587.2	586.5	585.7	585.0
175°	590.4	589.7	589.0	588.3
177.5°	592.3	591.6	590.9	590.1
180°	592.0	592.0	592.0	592.0

TEST NUMBER: P831277

CATALOG NUMBER: S123DIP-S1165D585U930-4F0-1E-UDD-G1

**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	17.17	18.22	17.92	18.98	19.89	19.41	20.46	20.15	21.21	22.13
	3H	18.83	19.77	19.59	20.54	21.48	20.85	21.79	21.60	22.55	23.50
	4H	19.42	20.30	20.19	21.08	22.04	21.30	22.19	22.08	22.97	23.92
	6H	19.80	20.61	20.58	21.40	22.37	21.59	22.40	22.38	23.19	24.16
	8H	19.90	20.67	20.70	21.48	22.45	21.66	22.43	22.45	23.24	24.21
	12H	19.95	20.69	20.75	21.49	22.48	21.68	22.42	22.48	23.22	24.22
4H	2H	17.77	18.65	18.55	19.43	20.39	19.59	20.48	20.37	21.26	22.21
	3H	19.61	20.35	20.40	21.16	22.13	21.23	21.96	22.02	22.78	23.75
	4H	20.32	20.99	21.12	21.80	22.80	21.82	22.49	22.62	23.30	24.30
	6H	20.80	21.38	21.62	22.22	23.22	22.23	22.81	23.06	23.65	24.65
	8H	20.94	21.48	21.77	22.31	23.33	22.35	22.89	23.17	23.72	24.74
	12H	21.02	21.50	21.86	22.36	23.38	22.40	22.89	23.25	23.74	24.76
8H	4H	20.60	21.14	21.42	21.97	22.99	21.94	22.48	22.76	23.31	24.33
	6H	21.19	21.64	22.05	22.51	23.53	22.45	22.89	23.30	23.77	24.79
	8H	21.40	21.80	22.27	22.67	23.70	22.63	23.02	23.49	23.89	24.93
	12H	21.53	21.88	22.40	22.74	23.83	22.74	23.09	23.60	23.95	25.04
12H	4H	20.61	21.09	21.45	21.95	22.97	21.92	22.41	22.77	23.26	24.28
	6H	21.24	21.64	22.11	22.51	23.54	22.46	22.86	23.33	23.73	24.76
	8H	21.49	21.83	22.35	22.70	23.79	22.67	23.02	23.54	23.88	24.97