

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: P831246

Luminaire Tested: S123DIP-S1165D365U927-4F0-1E-UDD-G

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831246
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-5)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DIP-S1165D365U927-4F0-1E-UDD-G
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: -

Summary

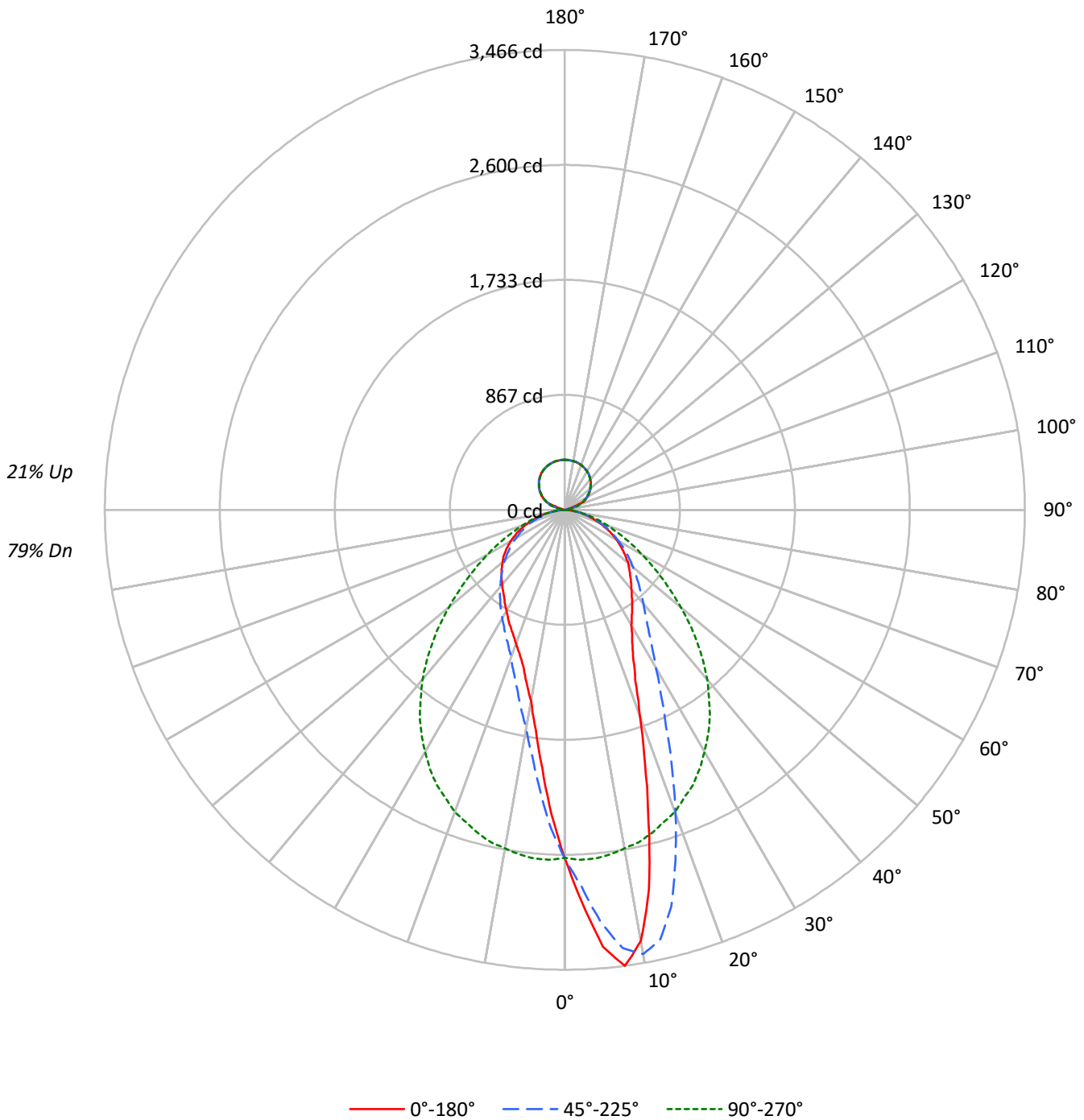
Lumens per Lamp: N/A
Luminaire Lumens: 5367.4 lumens
Efficiency: N/A
Efficacy: 102.8 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 52.2
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				
RC	80					70					50					30				
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																				
0	114	114	114	114	109	109	109	109	99	99	99	90	90	90	82	82	82	79		
1	105	101	97	94	100	96	93	90	88	86	83	81	79	77	74	73	71	68		
2	96	89	83	78	92	85	80	75	79	74	71	72	69	66	66	64	61	58		
3	89	79	72	66	84	76	70	64	70	65	61	65	60	57	60	56	53	50		
4	82	71	63	57	78	68	61	56	63	57	53	59	54	50	54	50	47	44		
5	76	64	56	50	72	62	54	49	57	51	46	53	48	44	49	45	42	39		
6	70	58	50	44	67	56	49	43	52	46	41	49	43	39	45	41	37	35		
7	65	53	45	40	63	51	44	39	48	42	37	45	40	36	42	37	34	32		
8	61	49	41	36	59	47	40	35	44	38	34	42	36	32	39	34	31	29		
9	57	45	38	33	55	44	37	32	41	35	31	39	33	30	36	32	28	26		
10	54	42	35	30	52	41	34	29	38	32	28	36	31	27	34	29	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	28243	28243	28243	28243	28243
5°	35718	33713	28496	22964	21102
10°	36066	37156	28306	18306	15996
15°	27164	34497	28113	15502	13527
20°	18927	27915	27755	13557	12287
25°	14433	21467	27143	12473	11525
30°	12485	17055	26166	11706	10912
35°	11583	14399	25039	11152	10479
40°	10967	12917	23456	10624	10333
45°	10602	11954	21444	10213	10268
50°	10419	11194	19063	9838	10215
55°	10031	10637	16726	9483	10260
60°	9672	10038	14417	9147	10092
65°	9088	9475	12437	8792	9892
70°	8393	8755	10578	8201	9312
75°	7594	7848	9062	7619	8509
80°	6267	6868	7172	6639	7172
85°	4965	5570	5261	5644	5718

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 24484 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	248.1	4.6
10°-20°	617.1	11.5
20°-30°	730.7	13.6
30°-40°	734.7	13.7
40°-50°	674.1	12.6
50°-60°	556.4	10.4
60°-70°	393.6	7.3
70°-80°	210.1	3.9
80°-90°	54.1	1.0
90°-100°	13.3	0.2
100°-110°	64.2	1.2
110°-120°	157.4	2.9
120°-130°	199.8	3.7
130°-140°	213.5	4.0
140°-150°	199.6	3.7
150°-160°	161.0	3.0
160°-170°	103.9	1.9
170°-180°	35.8	0.7
0°-30°	1595.9	29.7
0°-40°	2330.6	43.4
0°-60°	3561.0	66.3
0°-90°	4218.7	78.6
90°-120°	234.9	4.4
90°-150°	847.9	15.8
90°-180°	1149.0	21.4
0°-180°	5367.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2624	2624	2624	2624	2624	
5°	3306	3120	2637	2125	1953	315
15°	2438	3096	2523	1391	1214	673
25°	1215	1808	2285	1050	970	573
35°	882	1096	1906	849	798	554
45°	696	785	1409	671	674	539
55°	534	567	891	505	547	478
65°	357	372	488	345	388	355
75°	183	189	218	183	205	192
85°	40	45	43	46	46	45
90°	8	7	0	7	8	6
95°	11	9	17	9	11	9
105°	12	61	83	61	12	26
115°	165	161	156	161	165	155
125°	225	224	221	224	225	201
135°	277	277	275	277	277	214
145°	320	319	317	319	320	200
155°	348	349	349	349	348	161
165°	367	367	368	367	367	104
175°	375	376	377	376	375	36
180°	377	377	377	377	377	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2623.9	2623.9	2623.9	2623.9	2623.9	2623.9	2623.9	2623.9	2623.9	2623.9	2623.9
2.5°	2957.5	2954.5	2951.4	2936.2	2921.0	2913.7	2906.4	2884.5	2862.5	2838.2	2813.8
5°	3305.7	3314.3	3322.8	3313.0	3303.3	3273.5	3243.6	3204.1	3164.5	3120.1	3075.6
7.5°	3466.5	3471.3	3476.2	3470.1	3464.0	3456.1	3448.2	3412.9	3377.6	3331.9	3286.3
10°	3299.7	3310.6	3321.6	3345.3	3369.1	3395.8	3422.6	3417.8	3412.9	3399.5	3386.1
12.5°	2933.2	2946.6	2959.9	3007.4	3054.9	3115.8	3176.7	3229.0	3281.4	3317.9	3354.4
15°	2437.6	2474.7	2511.9	2555.1	2598.3	2687.8	2777.3	2887.5	2997.7	3095.7	3193.7
17.5°	2007.8	2021.8	2035.8	2082.1	2128.3	2241.0	2353.6	2480.8	2608.1	2770.6	2933.2
20°	1652.3	1665.0	1677.8	1738.7	1799.6	1887.9	1976.1	2119.2	2262.3	2437.0	2611.7
22.5°	1388.0	1408.1	1428.2	1462.3	1496.4	1581.0	1665.7	1792.9	1920.1	2113.1	2306.1
25°	1215.2	1229.8	1244.4	1265.1	1285.8	1353.3	1420.9	1525.6	1630.3	1807.5	1984.7
27.5°	1097.0	1103.1	1109.2	1129.9	1150.6	1194.5	1238.3	1328.4	1418.5	1568.9	1719.2
30°	1004.5	1008.8	1013.0	1031.3	1049.6	1079.4	1109.2	1174.4	1239.5	1372.2	1504.9
32.5°	940.0	943.0	946.1	960.1	974.1	995.4	1016.7	1064.2	1111.7	1221.2	1330.8
35°	881.5	883.4	885.2	895.5	905.9	921.7	937.5	973.5	1009.4	1095.8	1182.3
37.5°	830.4	832.8	835.3	841.4	847.4	861.4	875.4	904.1	932.7	999.0	1065.4
40°	780.5	784.7	789.0	793.3	797.5	809.1	820.7	842.6	864.5	919.3	974.1
42.5°	737.9	742.1	746.4	748.2	750.0	756.7	763.4	783.5	803.6	844.4	885.2
45°	696.5	698.3	700.1	701.9	703.8	709.2	714.7	732.4	750.0	785.3	820.7
47.5°	658.7	658.7	658.7	659.9	661.1	666.0	670.9	683.7	696.5	723.9	751.3
50°	622.2	622.2	622.2	620.4	618.5	621.6	624.6	634.4	644.1	668.5	692.8
52.5°	578.4	578.4	578.4	579.0	579.6	579.6	579.6	588.1	596.6	618.5	640.4
55°	534.5	537.0	539.4	537.6	535.7	537.0	538.2	543.7	549.1	566.8	584.4
57.5°	490.7	491.9	493.1	492.5	491.9	492.5	493.1	498.0	502.9	516.3	529.6
60°	449.3	449.3	449.3	448.1	446.9	448.1	449.3	451.7	454.2	466.3	478.5
62.5°	403.0	403.6	404.2	404.8	405.5	404.2	403.0	406.1	409.1	418.2	427.4
65°	356.8	357.4	358.0	359.8	361.6	360.4	359.2	362.2	365.3	372.0	378.7
67.5°	315.4	314.1	312.9	313.5	314.1	316.0	317.8	318.4	319.0	326.3	333.6
70°	266.7	267.9	269.1	268.5	267.9	268.5	269.1	270.9	272.7	278.2	283.7
72.5°	222.8	223.4	224.0	224.0	224.0	225.3	226.5	228.3	230.1	233.2	236.2
75°	182.6	182.6	182.6	183.9	185.1	185.7	186.3	186.3	186.3	188.7	191.2
77.5°	138.8	141.8	144.9	144.3	143.7	144.9	146.1	147.9	149.8	151.0	152.2
80°	101.1	101.1	101.1	101.7	102.3	104.1	105.9	107.1	108.4	110.8	113.2
82.5°	64.5	65.1	65.7	67.6	69.4	70.6	71.8	73.7	75.5	75.5	75.5
85°	40.2	39.0	37.7	39.0	40.2	41.4	42.6	43.2	43.8	45.1	46.3
87.5°	19.5	19.5	19.5	19.5	19.5	20.1	20.7	20.7	20.7	20.7	20.7
90°	8.4	8.3	8.1	8.0	7.9	7.7	7.5	7.2	7.0	6.7	5.9
92.5°	9.5	9.5	9.4	9.3	9.3	9.0	8.6	8.1	7.7	7.3	6.7
95°	10.6	10.6	10.6	10.6	10.6	10.4	10.0	9.5	9.1	8.7	8.0
97.5°	11.5	11.4	11.4	11.3	11.2	10.9	10.5	10.0	9.5	9.0	12.1
100°	11.8	11.7	11.6	11.6	11.5	11.2	10.7	10.2	9.7	9.2	18.9
102.5°	12.0	11.9	11.8	11.7	11.5	12.5	14.6	16.6	18.7	20.7	31.5
105°	12.3	12.2	12.1	11.9	11.8	17.3	28.3	39.3	50.3	61.3	66.9
107.5°	29.1	37.3	45.4	53.6	61.7	70.6	80.2	89.7	99.3	108.9	108.0
110°	77.0	85.9	94.8	103.7	112.6	118.0	120.1	122.1	124.2	126.2	125.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	145.8	146.0	146.1	146.2	146.3	146.1	145.6	145.0	144.4	143.9	143.2
115°	164.6	164.4	164.1	163.9	163.6	163.2	162.5	161.9	161.3	160.7	160.1
117.5°	179.7	179.7	179.6	179.5	179.5	179.2	178.7	178.2	177.7	177.2	176.9
120°	195.4	195.4	195.4	195.4	195.4	195.1	194.6	194.1	193.7	193.2	193.0
122.5°	210.8	210.7	210.7	210.6	210.5	210.4	210.0	209.7	209.4	209.1	208.9
125°	225.1	224.9	224.8	224.7	224.6	224.4	224.3	224.2	224.1	223.9	223.7
127.5°	239.1	239.2	239.3	239.4	239.6	239.5	239.3	239.2	239.0	238.8	238.5
130°	252.5	252.6	252.7	252.9	253.0	252.9	252.7	252.4	252.2	251.9	251.7
132.5°	264.8	265.0	265.2	265.4	265.6	265.5	265.3	265.0	264.8	264.5	264.3
135°	277.4	277.6	277.8	278.0	278.2	278.2	278.0	277.8	277.6	277.4	277.2
137.5°	289.5	289.6	289.7	289.8	289.9	289.9	289.5	289.2	288.9	288.6	288.5
140°	300.1	300.2	300.3	300.5	300.6	300.5	300.3	300.0	299.8	299.5	299.3
142.5°	309.9	310.1	310.3	310.4	310.6	310.6	310.4	310.3	310.1	309.9	309.7
145°	320.0	320.0	320.0	320.0	320.0	319.9	319.8	319.7	319.5	319.4	319.3
147.5°	327.2	327.6	327.9	328.2	328.5	328.6	328.5	328.3	328.2	328.1	328.0
150°	335.6	335.8	336.0	336.2	336.4	336.4	336.3	336.2	336.0	335.9	335.8
152.5°	342.4	342.7	343.0	343.3	343.6	343.6	343.4	343.1	342.9	342.6	342.6
155°	348.5	348.9	349.3	349.6	350.0	350.0	349.7	349.4	349.1	348.8	348.7
157.5°	353.8	354.3	354.8	355.3	355.8	355.9	355.5	355.1	354.8	354.4	354.5
160°	358.9	359.3	359.7	360.2	360.6	360.6	360.3	359.9	359.5	359.2	359.2
162.5°	363.6	364.0	364.4	364.8	365.1	365.1	364.7	364.2	363.8	363.4	363.4
165°	367.3	367.7	368.1	368.6	369.0	369.0	368.5	368.0	367.5	367.0	367.1
167.5°	370.1	370.6	371.1	371.6	372.1	372.1	371.6	371.1	370.6	370.1	370.1
170°	372.6	373.1	373.6	374.1	374.6	374.6	374.1	373.6	373.1	372.6	372.6
172.5°	374.0	374.5	375.1	375.7	376.2	376.3	375.8	375.3	374.8	374.3	374.2
175°	375.4	375.9	376.4	376.9	377.4	377.4	377.0	376.5	376.1	375.7	375.6
177.5°	375.7	376.3	376.9	377.5	378.2	378.2	377.7	377.2	376.7	376.2	376.2
180°	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2623.9	2623.9	2623.9	2623.9	2623.9	2623.9	2623.9	2623.9	2623.9	2623.9	2623.9
2.5°	2806.5	2799.2	2772.4	2745.7	2715.2	2684.8	2662.3	2639.7	2606.2	2572.8	2545.4
5°	3041.5	3007.4	2950.8	2894.2	2817.5	2740.8	2689.0	2637.3	2567.9	2498.5	2443.1
7.5°	3227.8	3169.4	3090.2	3011.1	2910.6	2810.2	2715.2	2620.2	2514.3	2408.4	2321.9
10°	3346.5	3307.0	3215.6	3124.3	2989.8	2855.2	2722.5	2589.8	2453.4	2317.1	2202.6
12.5°	3358.1	3361.8	3277.7	3193.7	3041.5	2889.3	2728.0	2566.7	2395.0	2223.3	2090.0
15°	3256.4	3319.1	3272.9	3226.6	3073.2	2919.8	2721.3	2522.8	2325.0	2127.1	1973.1
17.5°	3067.7	3202.2	3208.9	3215.6	3062.2	2908.8	2689.0	2469.3	2245.2	2021.2	1859.3
20°	2810.2	3008.7	3076.8	3145.0	3020.2	2895.4	2659.2	2423.0	2172.2	1921.3	1751.5
22.5°	2547.2	2788.3	2913.1	3037.9	2945.3	2852.8	2601.4	2349.9	2085.1	1820.3	1648.0
25°	2247.7	2510.7	2702.4	2894.2	2837.6	2781.0	2533.2	2285.4	2003.5	1721.7	1545.7
27.5°	1986.5	2253.8	2485.1	2716.4	2704.3	2692.1	2446.1	2200.2	1911.6	1623.0	1453.2
30°	1753.9	2002.9	2261.7	2520.4	2550.2	2580.1	2342.6	2105.2	1816.0	1526.9	1363.1
32.5°	1548.2	1765.5	2043.1	2320.7	2379.2	2437.6	2223.3	2009.0	1722.9	1436.8	1279.1
35°	1379.5	1576.8	1854.4	2132.0	2205.0	2278.1	2091.8	1905.5	1626.7	1347.9	1197.5
37.5°	1230.4	1395.4	1666.3	1937.2	2026.7	2116.2	1949.4	1782.5	1521.4	1260.2	1122.0
40°	1106.8	1239.5	1488.5	1737.5	1841.0	1944.5	1806.9	1669.3	1421.5	1173.8	1046.5
42.5°	1003.3	1121.4	1347.3	1573.1	1672.4	1771.6	1655.3	1539.0	1318.6	1098.3	982.0
45°	915.0	1009.4	1214.5	1419.7	1514.1	1608.4	1508.6	1408.7	1214.5	1020.3	912.0
47.5°	832.2	913.2	1088.5	1263.9	1347.9	1431.9	1354.0	1276.0	1111.7	947.3	849.3
50°	757.9	823.1	976.5	1129.9	1203.0	1276.0	1207.2	1138.4	1003.3	868.1	782.9
52.5°	693.4	746.4	874.8	1003.3	1066.0	1128.7	1069.6	1010.6	903.4	796.3	722.0
55°	629.5	674.5	786.0	897.4	940.0	982.6	936.9	891.3	804.8	718.4	655.7
57.5°	569.8	610.0	701.3	792.6	825.5	858.4	817.0	775.6	710.5	645.3	593.0
60°	511.4	544.3	620.4	696.5	716.5	736.6	703.2	669.7	624.0	578.4	531.5
62.5°	457.2	487.0	543.7	600.3	613.7	627.1	601.5	575.9	541.2	506.5	470.0
65°	401.2	423.7	470.0	516.3	524.8	533.3	510.8	488.3	462.1	435.9	409.1
67.5°	349.4	365.3	403.0	440.8	441.4	442.0	423.7	405.5	390.8	376.2	354.9
70°	298.9	314.1	339.1	364.1	364.7	365.3	350.7	336.1	325.1	314.1	298.3
72.5°	247.2	258.1	277.0	295.9	294.7	293.4	284.3	275.2	266.7	258.1	246.6
75°	200.3	209.4	222.2	235.0	231.3	227.7	222.8	217.9	210.6	203.3	196.0
77.5°	157.7	163.2	170.5	177.8	175.3	172.9	168.6	164.4	158.9	153.4	150.4
80°	115.7	118.1	123.0	127.8	126.6	125.4	120.5	115.7	114.5	113.2	109.0
82.5°	78.5	81.6	82.8	84.0	83.4	82.8	79.1	75.5	74.3	73.1	72.4
85°	46.9	47.5	48.1	48.7	46.9	45.1	43.8	42.6	42.6	42.6	42.0
87.5°	21.3	21.9	21.9	21.9	21.3	20.7	19.5	18.3	18.9	19.5	19.5
90°	5.1	4.3	3.5	2.8	2.1	1.5	0.9	0.3	0.9	1.5	2.1
92.5°	6.2	5.6	5.0	4.9	5.3	5.7	6.1	6.4	6.1	5.7	5.3
95°	7.3	6.6	5.9	6.9	9.4	12.0	14.5	17.1	14.5	12.0	9.4
97.5°	15.3	18.5	21.6	24.1	25.8	27.6	29.3	31.1	29.3	27.6	25.8
100°	28.6	38.4	48.1	52.3	51.0	49.8	48.6	47.3	48.6	49.8	51.0
102.5°	42.4	53.2	64.0	69.0	68.2	67.4	66.6	65.8	66.6	67.4	68.2
105°	72.5	78.1	83.7	86.2	85.5	84.8	84.1	83.4	84.1	84.8	85.5
107.5°	107.0	106.1	105.2	104.4	103.9	103.3	102.7	102.2	102.7	103.3	103.9
110°	124.9	124.2	123.5	122.9	122.4	121.9	121.4	120.9	121.4	121.9	122.4



TEST NUMBER: P831246

CATALOG NUMBER: S123DIP-S1165D365U927-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	142.5	141.8	141.1	140.6	140.2	139.7	139.3	138.8	139.3	139.7	140.2
115°	159.6	159.0	158.4	158.0	157.6	157.2	156.9	156.5	156.9	157.2	157.6
117.5°	176.6	176.3	176.0	175.6	175.1	174.7	174.3	173.8	174.3	174.7	175.1
120°	192.8	192.6	192.4	192.0	191.5	190.9	190.4	189.8	190.4	190.9	191.5
122.5°	208.6	208.4	208.1	207.8	207.3	206.9	206.5	206.0	206.5	206.9	207.3
125°	223.4	223.2	223.0	222.6	222.1	221.6	221.1	220.6	221.1	221.6	222.1
127.5°	238.2	237.8	237.5	237.1	236.6	236.1	235.6	235.1	235.6	236.1	236.6
130°	251.4	251.2	250.9	250.6	250.1	249.6	249.1	248.6	249.1	249.6	250.1
132.5°	264.2	264.0	263.8	263.4	263.0	262.5	262.0	261.5	262.0	262.5	263.0
135°	276.9	276.7	276.4	276.1	275.7	275.4	275.0	274.6	275.0	275.4	275.7
137.5°	288.4	288.2	288.1	287.8	287.3	286.8	286.3	285.8	286.3	286.8	287.3
140°	299.2	299.0	298.8	298.5	298.1	297.8	297.4	297.0	297.4	297.8	298.1
142.5°	309.5	309.3	309.1	308.9	308.5	308.1	307.7	307.4	307.7	308.1	308.5
145°	319.2	319.0	318.9	318.6	318.2	317.8	317.3	316.9	317.3	317.8	318.2
147.5°	327.8	327.7	327.6	327.4	327.1	326.7	326.4	326.1	326.4	326.7	327.1
150°	335.7	335.5	335.4	335.3	335.1	334.9	334.7	334.5	334.7	334.9	335.1
152.5°	342.5	342.5	342.4	342.3	342.3	342.2	342.1	342.1	342.1	342.2	342.3
155°	348.7	348.6	348.5	348.6	348.7	348.8	349.0	349.1	349.0	348.8	348.7
157.5°	354.5	354.6	354.6	354.7	354.7	354.7	354.7	354.7	354.7	354.7	354.7
160°	359.3	359.3	359.4	359.5	359.5	359.6	359.7	359.7	359.7	359.6	359.5
162.5°	363.5	363.5	363.6	363.7	363.9	364.1	364.3	364.5	364.3	364.1	363.9
165°	367.1	367.2	367.2	367.4	367.6	367.7	367.9	368.1	367.9	367.7	367.6
167.5°	370.1	370.1	370.1	370.2	370.4	370.7	370.9	371.2	370.9	370.7	370.4
170°	372.6	372.6	372.6	372.7	373.0	373.2	373.5	373.7	373.5	373.2	373.0
172.5°	374.1	374.1	374.0	374.1	374.5	374.8	375.1	375.4	375.1	374.8	374.5
175°	375.5	375.5	375.4	375.5	375.9	376.2	376.5	376.8	376.5	376.2	375.9
177.5°	376.1	376.0	376.0	376.1	376.4	376.7	377.0	377.3	377.0	376.7	376.4
180°	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8



TEST NUMBER: P831246

CATALOG NUMBER: S123DIP-S1165D365U927-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2623.9	2623.9	2623.9	2623.9	2623.9	2623.9	2623.9	2623.9	2623.9	2623.9	2623.9
2.5°	2518.0	2494.2	2470.5	2452.2	2434.0	2402.9	2371.9	2364.6	2357.2	2346.9	2336.5
5°	2387.7	2329.2	2270.8	2218.4	2166.1	2125.3	2084.5	2057.7	2030.9	2011.5	1992.0
7.5°	2235.5	2147.8	2060.2	1998.1	1936.0	1876.9	1817.9	1799.0	1780.1	1754.5	1729.0
10°	2088.2	1991.4	1894.6	1813.6	1732.6	1674.8	1617.0	1593.8	1570.7	1538.4	1506.2
12.5°	1956.7	1850.7	1744.8	1663.2	1581.6	1525.6	1469.6	1436.1	1402.7	1384.4	1366.1
15°	1819.1	1705.8	1592.6	1517.1	1441.6	1391.1	1340.6	1311.3	1282.1	1264.5	1246.8
17.5°	1697.3	1585.3	1473.3	1400.8	1328.4	1282.1	1235.8	1210.3	1184.7	1171.3	1157.9
20°	1581.6	1472.1	1362.5	1291.9	1221.2	1183.5	1145.7	1129.3	1112.9	1101.9	1091.0
22.5°	1475.7	1368.0	1260.2	1199.9	1139.7	1109.2	1078.8	1067.2	1055.6	1046.5	1037.4
25°	1369.8	1273.6	1177.4	1126.3	1075.1	1050.2	1025.2	1013.6	1002.1	992.9	983.8
27.5°	1283.3	1191.4	1099.5	1055.6	1011.8	992.3	972.9	963.7	954.6	946.1	937.5
30°	1199.3	1117.1	1034.9	997.2	959.5	941.8	924.1	915.0	905.9	898.0	890.1
32.5°	1121.4	1050.8	980.2	945.5	910.8	896.1	881.5	870.6	859.6	853.5	847.4
35°	1047.1	983.8	920.5	891.9	863.3	848.7	834.0	824.9	815.8	810.9	806.0
37.5°	983.8	927.2	870.6	843.2	815.8	801.8	787.8	779.9	771.9	770.1	768.3
40°	919.3	870.6	821.9	795.1	768.3	756.1	743.9	739.1	734.2	733.0	731.8
42.5°	865.7	818.2	770.7	746.4	722.0	711.7	701.3	698.9	696.5	698.3	700.1
45°	803.6	764.0	724.5	701.9	679.4	670.9	662.4	660.5	658.7	662.4	666.0
47.5°	751.3	714.7	678.2	656.9	635.6	629.5	623.4	622.8	622.2	627.1	631.9
50°	697.7	662.4	627.1	610.0	593.0	587.5	582.0	583.8	585.7	593.6	601.5
52.5°	647.8	614.9	582.0	566.2	550.3	546.7	543.0	547.3	551.6	560.1	568.6
55°	593.0	563.1	533.3	521.1	509.0	505.3	501.6	510.2	518.7	526.6	534.5
57.5°	540.6	514.4	488.3	477.3	466.3	465.7	465.1	473.0	480.9	489.5	498.0
60°	484.6	462.7	440.8	432.2	423.7	424.9	426.2	435.3	444.4	451.1	457.8
62.5°	433.5	415.2	396.9	389.0	381.1	384.1	387.2	396.3	405.5	413.4	421.3
65°	382.3	367.1	351.9	346.4	340.9	345.2	349.4	357.4	365.3	370.8	376.2
67.5°	333.6	320.8	308.0	303.8	299.5	303.8	308.0	316.0	323.9	329.4	334.8
70°	282.5	272.1	261.8	258.7	255.7	260.6	265.4	272.1	278.8	284.3	289.8
72.5°	235.0	227.1	219.2	218.6	217.9	222.2	226.5	233.2	239.9	243.5	247.2
75°	188.7	184.5	180.2	179.6	179.0	183.2	187.5	191.2	194.8	197.9	200.9
77.5°	147.3	143.7	140.0	140.6	141.2	144.3	147.3	151.0	154.6	156.5	158.3
80°	104.7	103.5	102.3	103.5	104.7	107.1	109.6	112.0	114.5	115.7	116.9
82.5°	71.8	70.6	69.4	71.2	73.1	74.9	76.7	78.5	80.4	81.0	81.6
85°	41.4	43.2	45.1	45.1	45.1	45.7	46.3	46.9	47.5	46.9	46.3
87.5°	19.5	20.1	20.7	20.7	20.7	21.3	21.9	21.9	21.9	21.3	20.7
90°	2.8	3.5	4.3	5.1	5.9	6.7	7.0	7.2	7.5	7.7	7.9
92.5°	4.9	5.0	5.6	6.2	6.7	7.3	7.7	8.1	8.6	9.0	9.3
95°	6.9	5.9	6.6	7.3	8.0	8.7	9.1	9.5	10.0	10.4	10.6
97.5°	24.1	21.6	18.5	15.3	12.1	9.0	9.5	10.0	10.5	10.9	11.2
100°	52.3	48.1	38.4	28.6	18.9	9.2	9.7	10.2	10.7	11.2	11.5
102.5°	69.0	64.0	53.2	42.4	31.5	20.7	18.7	16.6	14.6	12.5	11.5
105°	86.2	83.7	78.1	72.5	66.9	61.3	50.3	39.3	28.3	17.3	11.8
107.5°	104.4	105.2	106.1	107.0	108.0	108.9	99.3	89.7	80.2	70.6	61.7
110°	122.9	123.5	124.2	124.9	125.6	126.2	124.2	122.1	120.1	118.0	112.6



TEST NUMBER: P831246

CATALOG NUMBER: S123DIP-S1165D365U927-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	140.6	141.1	141.8	142.5	143.2	143.9	144.4	145.0	145.6	146.1	146.3
115°	158.0	158.4	159.0	159.6	160.1	160.7	161.3	161.9	162.5	163.2	163.6
117.5°	175.6	176.0	176.3	176.6	176.9	177.2	177.7	178.2	178.7	179.2	179.5
120°	192.0	192.4	192.6	192.8	193.0	193.2	193.7	194.1	194.6	195.1	195.4
122.5°	207.8	208.1	208.4	208.6	208.9	209.1	209.4	209.7	210.0	210.4	210.5
125°	222.6	223.0	223.2	223.4	223.7	223.9	224.1	224.2	224.3	224.4	224.6
127.5°	237.1	237.5	237.8	238.2	238.5	238.8	239.0	239.2	239.3	239.5	239.6
130°	250.6	250.9	251.2	251.4	251.7	251.9	252.2	252.4	252.7	252.9	253.0
132.5°	263.4	263.8	264.0	264.2	264.3	264.5	264.8	265.0	265.3	265.5	265.6
135°	276.1	276.4	276.7	276.9	277.2	277.4	277.6	277.8	278.0	278.2	278.2
137.5°	287.8	288.1	288.2	288.4	288.5	288.6	288.9	289.2	289.5	289.9	289.9
140°	298.5	298.8	299.0	299.2	299.3	299.5	299.8	300.0	300.3	300.5	300.6
142.5°	308.9	309.1	309.3	309.5	309.7	309.9	310.1	310.3	310.4	310.6	310.6
145°	318.6	318.9	319.0	319.2	319.3	319.4	319.5	319.7	319.8	319.9	320.0
147.5°	327.4	327.6	327.7	327.8	328.0	328.1	328.2	328.3	328.5	328.6	328.5
150°	335.3	335.4	335.5	335.7	335.8	335.9	336.0	336.2	336.3	336.4	336.4
152.5°	342.3	342.4	342.5	342.5	342.6	342.6	342.9	343.1	343.4	343.6	343.6
155°	348.6	348.5	348.6	348.7	348.7	348.8	349.1	349.4	349.7	350.0	350.0
157.5°	354.7	354.6	354.6	354.5	354.5	354.4	354.8	355.1	355.5	355.9	355.8
160°	359.5	359.4	359.3	359.3	359.2	359.2	359.5	359.9	360.3	360.6	360.6
162.5°	363.7	363.6	363.5	363.5	363.4	363.4	363.8	364.2	364.7	365.1	365.1
165°	367.4	367.2	367.2	367.1	367.1	367.0	367.5	368.0	368.5	369.0	369.0
167.5°	370.2	370.1	370.1	370.1	370.1	370.1	370.6	371.1	371.6	372.1	372.1
170°	372.7	372.6	372.6	372.6	372.6	372.6	373.1	373.6	374.1	374.6	374.6
172.5°	374.1	374.0	374.1	374.1	374.2	374.3	374.8	375.3	375.8	376.3	376.2
175°	375.5	375.4	375.5	375.5	375.6	375.7	376.1	376.5	377.0	377.4	377.4
177.5°	376.1	376.0	376.0	376.1	376.2	376.2	376.7	377.2	377.7	378.2	378.2
180°	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8



TEST NUMBER: P831246

CATALOG NUMBER: S123DIP-S1165D365U927-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2623.9	2623.9	2623.9	2623.9
2.5°	2332.3	2328.0	2311.0	2293.9
5°	1977.4	1962.7	1957.9	1953.0
7.5°	1727.8	1726.5	1701.0	1675.4
10°	1508.0	1509.8	1486.7	1463.5
12.5°	1350.9	1335.7	1333.9	1332.0
15°	1232.8	1218.8	1216.4	1213.9
17.5°	1149.4	1140.9	1138.4	1136.0
20°	1086.1	1081.2	1077.0	1072.7
22.5°	1031.3	1025.2	1021.6	1017.9
25°	978.3	972.9	971.6	970.4
27.5°	930.8	924.1	924.1	924.1
30°	885.8	881.5	879.7	877.9
32.5°	843.8	840.1	840.1	840.1
35°	804.2	802.4	800.0	797.5
37.5°	768.3	768.3	767.1	765.9
40°	733.6	735.4	735.4	735.4
42.5°	701.9	703.8	703.8	703.8
45°	669.1	672.1	673.3	674.5
47.5°	636.8	641.7	642.9	644.1
50°	605.1	608.8	609.4	610.0
52.5°	572.9	577.1	580.2	583.2
55°	538.8	543.0	544.9	546.7
57.5°	502.3	506.5	507.1	507.7
60°	462.1	466.3	467.6	468.8
62.5°	423.7	426.2	427.4	428.6
65°	379.9	383.5	386.0	388.4
67.5°	337.9	340.9	340.9	340.9
70°	291.0	292.2	294.0	295.9
72.5°	247.8	248.4	248.4	248.4
75°	202.1	203.3	203.9	204.6
77.5°	158.9	159.5	159.5	159.5
80°	116.3	115.7	115.7	115.7
82.5°	79.8	77.9	77.9	77.9
85°	45.7	45.1	45.7	46.3
87.5°	20.7	20.7	20.7	20.7
90°	8.0	8.1	8.3	8.4
92.5°	9.3	9.4	9.5	9.5
95°	10.6	10.6	10.6	10.6
97.5°	11.3	11.4	11.4	11.5
100°	11.6	11.6	11.7	11.8
102.5°	11.7	11.8	11.9	12.0
105°	11.9	12.1	12.2	12.3
107.5°	53.6	45.4	37.3	29.1
110°	103.7	94.8	85.9	77.0



TEST NUMBER: P831246

CATALOG NUMBER: S123DIP-S1165D365U927-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	146.2	146.1	146.0	145.8
115°	163.9	164.1	164.4	164.6
117.5°	179.5	179.6	179.7	179.7
120°	195.4	195.4	195.4	195.4
122.5°	210.6	210.7	210.7	210.8
125°	224.7	224.8	224.9	225.1
127.5°	239.4	239.3	239.2	239.1
130°	252.9	252.7	252.6	252.5
132.5°	265.4	265.2	265.0	264.8
135°	278.0	277.8	277.6	277.4
137.5°	289.8	289.7	289.6	289.5
140°	300.5	300.3	300.2	300.1
142.5°	310.4	310.3	310.1	309.9
145°	320.0	320.0	320.0	320.0
147.5°	328.2	327.9	327.6	327.2
150°	336.2	336.0	335.8	335.6
152.5°	343.3	343.0	342.7	342.4
155°	349.6	349.3	348.9	348.5
157.5°	355.3	354.8	354.3	353.8
160°	360.2	359.7	359.3	358.9
162.5°	364.8	364.4	364.0	363.6
165°	368.6	368.1	367.7	367.3
167.5°	371.6	371.1	370.6	370.1
170°	374.1	373.6	373.1	372.6
172.5°	375.7	375.1	374.5	374.0
175°	376.9	376.4	375.9	375.4
177.5°	377.5	376.9	376.3	375.7
180°	376.8	376.8	376.8	376.8



TEST NUMBER: P831246

CATALOG NUMBER: S123DIP-S1165D365U927-4F0-1E-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	17.53	18.65	18.20	19.34	20.13	19.76	20.89	20.44	21.57	22.37
	3H	19.19	20.20	19.88	20.90	21.73	21.21	22.22	21.89	22.91	23.74
	4H	19.78	20.73	20.49	21.44	22.28	21.67	22.62	22.38	23.33	24.17
	6H	20.17	21.04	20.89	21.76	22.62	21.96	22.83	22.68	23.55	24.41
	8H	20.27	21.10	21.00	21.84	22.70	22.03	22.86	22.76	23.60	24.46
	12H	20.32	21.12	21.06	21.85	22.73	22.05	22.85	22.79	23.58	24.47
4H	2H	18.13	19.08	18.84	19.79	20.63	19.96	20.91	20.67	21.61	22.46
	3H	19.98	20.77	20.71	21.52	22.38	21.60	22.39	22.32	23.13	23.99
	4H	20.69	21.41	21.43	22.15	23.05	22.19	22.91	22.93	23.65	24.55
	6H	21.18	21.80	21.94	22.57	23.47	22.61	23.23	23.37	24.00	24.90
	8H	21.32	21.90	22.08	22.67	23.58	22.73	23.31	23.49	24.07	24.98
	12H	21.40	21.92	22.18	22.71	23.63	22.78	23.30	23.56	24.09	25.01
8H	4H	20.98	21.56	21.74	22.32	23.23	22.32	22.90	23.08	23.66	24.57
	6H	21.58	22.05	22.37	22.86	23.78	22.83	23.31	23.62	24.12	25.03
	8H	21.78	22.21	22.59	23.02	23.95	23.01	23.44	23.81	24.24	25.17
	12H	21.92	22.29	22.72	23.09	24.08	23.12	23.50	23.93	24.30	25.29
12H	4H	20.99	21.51	21.77	22.30	23.22	22.30	22.82	23.08	23.61	24.53
	6H	21.63	22.05	22.43	22.86	23.79	22.84	23.27	23.65	24.08	25.01
	8H	21.87	22.25	22.68	23.05	24.04	23.06	23.43	23.86	24.23	25.22