

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: P831104

Luminaire Tested: S123DIP-S1000D365U835-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831104
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-S1000D365U835-4F0-1E-UDD-G4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: -

Summary

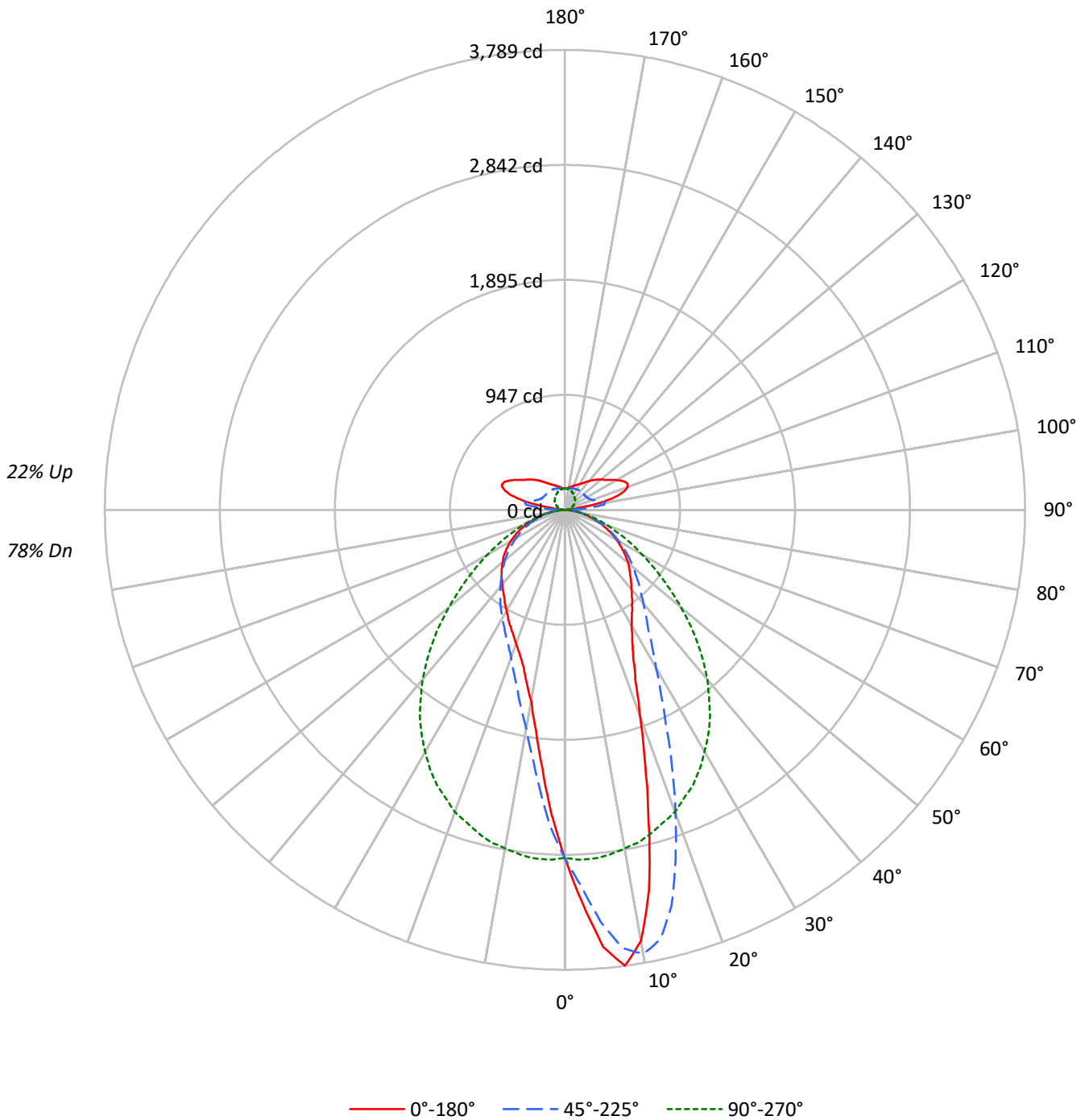
Lumens per Lamp: N/A
Luminaire Lumens: 5924.3 lumens
Efficiency: N/A
Efficacy: 131.4 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 45.1
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	114	114	114	114	109	109	109	109	99	99	99	90	90	90	82	82	82	78				
1	105	101	97	93	100	96	93	90	88	85	83	80	78	77	73	72	71	67				
2	96	89	83	78	92	85	80	75	78	74	70	72	68	65	66	63	61	58				
3	88	79	72	66	84	76	69	64	70	65	60	64	60	57	59	56	53	50				
4	82	71	63	57	78	68	61	56	63	57	52	58	53	49	54	50	47	44				
5	75	64	56	50	72	62	54	49	57	51	46	53	48	44	49	45	41	39				
6	70	58	50	44	67	56	49	43	52	46	41	48	43	39	45	41	37	35				
7	65	53	45	40	62	51	44	39	48	42	37	45	39	35	42	37	34	31				
8	61	49	41	36	58	47	40	35	44	38	34	41	36	32	39	34	31	29				
9	57	45	38	33	55	44	37	32	41	35	31	38	33	29	36	31	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°	30870	30870	30870	30870	30870
5°	39041	36847	31147	25099	23064
10°	39419	40611	30938	20007	17484
15°	29690	37706	30729	16944	14785
20°	20686	30511	30336	14818	13431
25°	15775	23464	29667	13632	12598
30°	13646	18641	28599	12795	11926
35°	12661	15738	27367	12189	11454
40°	11987	14119	25638	11612	11294
45°	11587	13067	23440	11163	11224
50°	11387	12234	20837	10752	11164
55°	10963	11626	18282	10365	11213
60°	10572	10973	15756	10000	11031
65°	9931	10356	13593	9610	10812
70°	9171	9571	11560	8963	10178
75°	8301	8580	9906	8330	9299
80°	6850	7507	7835	7259	7835
85°	5422	6076	5755	6163	6249

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 26761 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	271.1	4.6
10°-20°	674.5	11.4
20°-30°	798.7	13.5
30°-40°	803.0	13.6
40°-50°	736.8	12.4
50°-60°	608.1	10.3
60°-70°	430.2	7.3
70°-80°	229.6	3.9
80°-90°	59.2	1.0
90°-100°	94.7	1.6
100°-110°	277.3	4.7
110°-120°	270.8	4.6
120°-130°	215.7	3.6
130°-140°	170.2	2.9
140°-150°	126.9	2.1
150°-160°	88.5	1.5
160°-170°	52.0	0.9
170°-180°	16.9	0.3
0°-30°	1744.3	29.4
0°-40°	2547.3	43.0
0°-60°	3892.2	65.7
0°-90°	4611.2	77.8
90°-120°	642.9	10.9
90°-150°	1155.7	19.5
90°-180°	1313.0	22.2
0°-180°	5924.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2868	2868	2868	2868	2868	
5°	3613	3410	2883	2323	2135	344
15°	2664	3384	2758	1520	1327	736
25°	1328	1976	2498	1148	1061	627
35°	964	1198	2083	928	872	605
45°	761	858	1540	733	737	590
55°	584	620	974	552	598	523
65°	390	407	534	377	424	387
75°	200	206	238	200	224	210
85°	44	49	47	50	51	49
90°	10	9	1	9	10	8
95°	41	210	12	210	41	67
105°	450	284	41	284	450	448
115°	547	217	72	217	547	533
125°	431	203	101	203	431	390
135°	350	200	118	200	350	271
145°	273	198	135	198	273	173
155°	226	191	153	191	226	106
165°	198	183	167	183	198	56
175°	178	176	174	176	178	17
180°	175	175	175	175	175	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9
2.5°	3232.6	3229.2	3225.9	3209.3	3192.6	3184.6	3176.7	3152.7	3128.8	3102.1	3075.5
5°	3613.2	3622.5	3631.8	3621.2	3610.5	3577.9	3545.3	3502.0	3458.8	3410.2	3361.6
7.5°	3788.8	3794.2	3799.5	3792.8	3786.2	3777.5	3768.9	3730.3	3691.7	3641.8	3591.9
10°	3606.5	3618.5	3630.5	3656.4	3682.4	3711.6	3740.9	3735.6	3730.3	3715.6	3701.0
12.5°	3205.9	3220.6	3235.2	3287.1	3339.0	3405.6	3472.1	3529.3	3586.6	3626.5	3666.4
15°	2664.3	2704.9	2745.5	2792.7	2840.0	2937.8	3035.6	3156.0	3276.5	3383.6	3490.7
17.5°	2194.5	2209.8	2225.1	2275.7	2326.3	2449.4	2572.5	2711.5	2850.6	3028.3	3205.9
20°	1805.9	1819.9	1833.9	1900.4	1966.9	2063.4	2159.9	2316.3	2472.7	2663.6	2854.6
22.5°	1517.1	1539.1	1561.0	1598.3	1635.6	1728.1	1820.6	1959.6	2098.7	2309.6	2520.6
25°	1328.2	1344.1	1360.1	1382.7	1405.3	1479.2	1553.1	1667.5	1782.0	1975.6	2169.2
27.5°	1199.1	1205.7	1212.4	1235.0	1257.6	1305.5	1353.4	1451.9	1550.4	1714.8	1879.1
30°	1097.9	1102.6	1107.2	1127.2	1147.2	1179.8	1212.4	1283.6	1354.8	1499.8	1644.9
32.5°	1027.4	1030.7	1034.0	1049.3	1064.7	1087.9	1111.2	1163.1	1215.0	1334.8	1454.6
35°	963.5	965.5	967.5	978.8	990.1	1007.4	1024.7	1064.0	1103.2	1197.7	1292.2
37.5°	907.6	910.3	912.9	919.6	926.2	941.6	956.9	988.1	1019.4	1091.9	1164.5
40°	853.1	857.7	862.4	867.0	871.7	884.3	897.0	920.9	944.9	1004.8	1064.7
42.5°	806.5	811.1	815.8	817.8	819.8	827.1	834.4	856.4	878.3	922.9	967.5
45°	761.2	763.2	765.2	767.2	769.2	775.2	781.2	800.5	819.8	858.4	897.0
47.5°	720.0	720.0	720.0	721.3	722.6	728.0	733.3	747.3	761.2	791.2	821.1
50°	680.0	680.0	680.0	678.1	676.1	679.4	682.7	693.4	704.0	730.6	757.2
52.5°	632.1	632.1	632.1	632.8	633.5	633.5	633.5	642.8	652.1	676.1	700.0
55°	584.2	586.9	589.6	587.6	585.6	586.9	588.2	594.2	600.2	619.5	638.8
57.5°	536.3	537.7	539.0	538.3	537.7	538.3	539.0	544.3	549.6	564.3	578.9
60°	491.1	491.1	491.1	489.7	488.4	489.7	491.1	493.7	496.4	509.7	523.0
62.5°	440.5	441.2	441.8	442.5	443.2	441.8	440.5	443.8	447.2	457.1	467.1
65°	389.9	390.6	391.3	393.3	395.3	393.9	392.6	395.9	399.2	406.6	413.9
67.5°	344.7	343.4	342.0	342.7	343.4	345.3	347.3	348.0	348.7	356.7	364.6
70°	291.4	292.8	294.1	293.4	292.8	293.4	294.1	296.1	298.1	304.1	310.1
72.5°	243.5	244.2	244.9	244.9	244.9	246.2	247.5	249.5	251.5	254.9	258.2
75°	199.6	199.6	199.6	201.0	202.3	202.9	203.6	203.6	203.6	206.3	208.9
77.5°	151.7	155.0	158.4	157.7	157.0	158.4	159.7	161.7	163.7	165.0	166.4
80°	110.5	110.5	110.5	111.1	111.8	113.8	115.8	117.1	118.4	121.1	123.8
82.5°	70.5	71.2	71.9	73.9	75.9	77.2	78.5	80.5	82.5	82.5	82.5
85°	43.9	42.6	41.3	42.6	43.9	45.2	46.6	47.2	47.9	49.2	50.6
87.5°	21.3	21.3	21.3	21.3	21.3	22.0	22.6	22.6	22.6	22.6	22.6
90°	10.2	10.6	10.2	9.9	10.2	9.5	9.2	8.8	8.5	8.8	7.8
92.5°	18.7	19.4	19.1	20.5	21.2	23.7	27.2	35.0	49.1	65.7	72.8
95°	41.0	42.4	44.9	48.1	54.8	67.5	86.2	127.2	170.0	209.6	186.6
97.5°	84.1	88.0	96.5	109.9	133.6	173.9	220.5	292.2	333.2	322.3	240.7
100°	221.6	221.2	235.0	260.8	296.5	346.7	388.0	416.6	404.3	334.7	226.2
102.5°	350.9	361.2	372.1	391.2	417.0	444.2	464.0	458.0	407.8	311.7	205.0
105°	449.5	451.3	462.6	476.0	492.3	501.4	494.7	459.4	385.5	284.1	188.4
107.5°	513.8	517.7	522.3	528.7	530.8	521.2	493.7	438.2	353.7	259.7	176.3
110°	550.6	551.3	552.0	549.2	539.3	514.5	470.0	405.0	324.1	239.6	170.0

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	558.0	557.6	554.1	543.9	523.7	490.1	438.9	372.1	298.3	226.2	166.4
115°	546.7	544.9	537.8	522.3	495.8	457.3	405.3	343.8	278.5	217.3	166.1
117.5°	521.9	519.5	508.9	491.6	464.0	424.1	376.4	321.9	265.4	211.3	166.4
120°	489.4	487.3	478.8	459.0	431.1	395.4	353.0	305.3	255.5	207.4	167.9
122.5°	459.0	456.2	446.7	429.4	405.3	372.8	334.3	292.2	247.4	205.0	170.3
125°	431.1	428.7	419.8	404.3	381.7	353.4	319.5	280.9	240.7	202.8	172.8
127.5°	407.1	405.0	396.8	383.4	362.9	336.8	305.7	270.7	234.3	201.8	175.6
130°	387.3	384.5	377.1	364.3	345.6	321.6	293.0	261.1	229.3	200.7	178.5
132.5°	367.9	366.1	359.7	347.0	329.7	307.1	280.9	252.3	224.8	200.4	180.6
135°	349.5	347.0	340.7	330.1	312.7	292.6	269.6	244.5	220.9	200.0	182.7
137.5°	330.1	327.9	322.6	311.7	296.8	278.8	258.3	237.1	217.3	199.3	184.1
140°	309.6	309.9	304.3	294.4	280.9	265.7	248.8	230.8	214.1	199.0	185.5
142.5°	290.5	290.8	285.9	277.4	266.4	253.7	239.6	224.8	211.3	198.2	186.6
145°	273.2	272.5	269.6	262.2	253.4	243.1	231.8	220.2	208.8	197.5	186.9
147.5°	258.3	258.0	255.1	249.8	242.8	235.4	225.8	216.3	206.4	196.5	186.9
150°	245.6	245.6	243.5	239.6	234.3	227.6	220.2	212.0	203.9	195.1	186.9
152.5°	235.0	235.0	233.9	230.4	226.5	221.2	214.9	208.1	201.1	193.3	185.9
155°	226.5	226.2	225.5	222.6	219.4	215.2	209.9	204.3	198.2	191.2	185.2
157.5°	218.4	218.4	217.7	215.6	212.7	209.2	205.0	200.0	195.1	189.4	184.1
160°	210.6	211.0	211.0	208.8	206.4	203.9	200.4	196.5	191.9	187.3	183.4
162.5°	203.5	203.9	203.9	202.1	200.7	198.6	195.4	192.2	188.7	185.2	182.0
165°	197.5	197.5	197.9	196.5	195.1	193.3	190.8	188.7	185.9	183.1	180.6
167.5°	191.5	191.5	191.9	190.8	190.1	188.7	187.3	185.5	183.1	180.9	179.2
170°	186.2	186.2	186.6	185.9	185.5	184.8	183.4	182.3	180.6	178.8	177.8
172.5°	181.3	181.6	182.3	181.6	181.6	181.3	180.2	179.5	178.1	177.0	176.7
175°	177.8	178.1	178.5	178.1	178.1	178.1	177.4	177.0	176.3	175.6	175.6
177.5°	175.3	175.3	176.0	175.6	176.0	176.0	175.6	175.3	174.9	174.6	174.9
180°	174.6	174.6	174.6	174.6	174.6	174.6	174.6	174.6	174.6	174.6	174.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9
2.5°	3067.5	3059.5	3030.3	3001.0	2967.7	2934.5	2909.8	2885.2	2848.6	2812.0	2782.1
5°	3324.4	3287.1	3225.2	3163.4	3079.5	2995.7	2939.1	2882.6	2806.7	2730.8	2670.3
7.5°	3528.0	3464.1	3377.6	3291.1	3181.3	3071.5	2967.7	2863.9	2748.1	2632.4	2537.9
10°	3657.8	3614.5	3514.7	3414.9	3267.8	3120.8	2975.7	2830.6	2681.6	2532.5	2407.4
12.5°	3670.4	3674.4	3582.6	3490.7	3324.4	3158.0	2981.7	2805.4	2617.7	2430.1	2284.3
15°	3559.3	3627.8	3577.2	3526.7	3359.0	3191.3	2974.4	2757.5	2541.2	2324.9	2156.6
17.5°	3353.0	3500.0	3507.4	3514.7	3347.0	3179.3	2939.1	2698.9	2454.0	2209.2	2032.2
20°	3071.5	3288.4	3363.0	3437.5	3301.1	3164.7	2906.5	2648.3	2374.2	2100.0	1914.4
22.5°	2784.1	3047.6	3184.0	3320.4	3219.2	3118.1	2843.3	2568.5	2279.0	1989.6	1801.3
25°	2456.7	2744.1	2953.7	3163.4	3101.5	3039.6	2768.8	2497.9	2189.9	1881.8	1689.5
27.5°	2171.2	2463.3	2716.2	2969.1	2955.7	2942.4	2673.6	2404.8	2089.4	1774.0	1588.3
30°	1917.0	2189.2	2472.0	2754.8	2787.4	2820.0	2560.5	2301.0	1984.9	1668.8	1489.8
32.5°	1692.1	1929.7	2233.1	2536.5	2600.4	2664.3	2430.1	2195.8	1883.1	1570.4	1398.0
35°	1507.8	1723.4	2026.8	2330.3	2410.1	2490.0	2286.3	2082.7	1778.0	1473.2	1308.9
37.5°	1344.8	1525.1	1821.2	2117.3	2215.1	2313.0	2130.6	1948.3	1662.9	1377.4	1226.3
40°	1209.7	1354.8	1626.9	1899.1	2012.2	2125.3	1974.9	1824.6	1553.7	1282.9	1143.8
42.5°	1096.6	1225.7	1472.5	1719.4	1827.9	1936.3	1809.2	1682.2	1441.3	1200.4	1073.3
45°	1000.1	1103.2	1327.5	1551.7	1654.9	1758.0	1648.9	1539.8	1327.5	1115.2	996.8
47.5°	909.6	998.1	1189.8	1381.4	1473.2	1565.0	1479.9	1394.7	1215.0	1035.4	928.2
50°	828.4	899.6	1067.3	1235.0	1314.8	1394.7	1319.5	1244.3	1096.6	948.9	855.7
52.5°	757.9	815.8	956.2	1096.6	1165.1	1233.7	1169.1	1104.6	987.5	870.4	789.2
55°	688.0	737.3	859.0	980.8	1027.4	1074.0	1024.1	974.2	879.7	785.2	716.6
57.5°	622.8	666.7	766.6	866.4	902.3	938.2	893.0	847.7	776.5	705.3	648.1
60°	558.9	594.9	678.1	761.2	783.2	805.1	768.5	731.9	682.0	632.1	580.9
62.5°	499.7	532.3	594.2	656.1	670.7	685.4	657.4	629.5	591.5	553.6	513.7
65°	438.5	463.1	513.7	564.3	573.6	582.9	558.3	533.7	505.0	476.4	447.2
67.5°	381.9	399.2	440.5	481.8	482.4	483.1	463.1	443.2	427.2	411.2	387.9
70°	326.7	343.4	370.6	397.9	398.6	399.2	383.3	367.3	355.3	343.4	326.1
72.5°	270.2	282.1	302.8	323.4	322.1	320.7	310.7	300.8	291.4	282.1	269.5
75°	218.9	228.9	242.9	256.8	252.9	248.9	243.5	238.2	230.2	222.2	214.3
77.5°	172.3	178.3	186.3	194.3	191.6	189.0	184.3	179.7	173.7	167.7	164.4
80°	126.4	129.1	134.4	139.7	138.4	137.1	131.8	126.4	125.1	123.8	119.1
82.5°	85.8	89.2	90.5	91.8	91.2	90.5	86.5	82.5	81.2	79.8	79.2
85°	51.2	51.9	52.6	53.2	51.2	49.2	47.9	46.6	46.6	46.6	45.9
87.5°	23.3	24.0	24.0	24.0	23.3	22.6	21.3	20.0	20.6	21.3	21.3
90°	6.7	5.7	4.6	3.9	3.2	2.1	1.4	0.7	1.4	2.1	3.2
92.5°	54.4	35.7	24.4	18.0	14.5	11.3	7.8	5.3	7.8	11.3	14.5
95°	128.6	76.0	45.9	32.2	23.0	17.0	13.1	12.0	13.1	17.0	23.0
97.5°	143.1	82.0	52.3	37.1	27.9	22.6	19.4	19.1	19.4	22.6	27.9
100°	133.2	80.9	56.2	42.4	33.9	29.0	26.5	26.2	26.5	29.0	33.9
102.5°	124.7	82.3	60.8	48.4	41.0	36.4	34.3	33.6	34.3	36.4	41.0
105°	121.6	85.2	66.1	55.1	48.4	44.2	42.1	41.0	42.1	44.2	48.4
107.5°	120.9	89.8	72.8	62.5	56.2	51.9	49.8	48.8	49.8	51.9	56.2
110°	122.6	95.8	79.9	70.0	64.0	60.1	58.3	57.2	58.3	60.1	64.0



TEST NUMBER: P831104

CATALOG NUMBER: S123DIP-S1000D365U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	126.2	101.8	87.3	77.7	71.7	67.8	66.1	65.0	66.1	67.8	71.7
115°	130.0	108.5	95.1	85.5	79.5	76.0	73.9	72.4	73.9	76.0	79.5
117.5°	135.0	115.6	102.1	93.3	86.6	83.4	81.6	79.9	81.6	83.4	86.6
120°	140.6	122.3	109.5	100.7	94.0	90.5	88.7	87.6	88.7	90.5	94.0
122.5°	145.9	129.3	117.0	107.4	101.1	97.2	95.4	94.4	95.4	97.2	101.1
125°	151.6	136.1	123.7	114.1	107.4	103.5	101.4	100.7	101.4	103.5	107.4
127.5°	156.2	142.1	130.0	120.5	113.1	109.2	106.7	105.7	106.7	109.2	113.1
130°	160.8	147.4	135.7	126.2	118.7	114.5	111.3	110.3	111.3	114.5	118.7
132.5°	165.0	152.0	140.6	131.5	124.0	118.7	115.2	113.8	115.2	118.7	124.0
135°	168.6	156.5	145.6	136.1	128.6	123.3	119.4	118.0	119.4	123.3	128.6
137.5°	171.4	159.7	149.1	140.3	132.9	127.2	123.3	121.9	123.3	127.2	132.9
140°	173.5	162.9	152.7	143.8	136.8	131.1	127.6	125.8	127.6	131.1	136.8
142.5°	175.6	165.4	155.5	147.4	140.3	135.3	131.5	130.0	131.5	135.3	140.3
145°	177.0	167.5	158.3	150.2	144.2	138.9	135.7	134.6	135.7	138.9	144.2
147.5°	178.1	169.3	160.8	153.7	147.7	143.1	139.9	139.2	139.9	143.1	147.7
150°	178.5	171.0	162.9	156.5	151.6	147.0	144.2	143.8	144.2	147.0	151.6
152.5°	179.2	172.1	165.4	159.4	155.1	151.2	148.4	148.4	148.4	151.2	155.1
155°	179.2	173.5	167.5	162.6	158.7	155.1	153.0	153.0	153.0	155.1	158.7
157.5°	179.5	174.2	169.3	165.4	161.8	158.7	156.9	156.5	156.9	158.7	161.8
160°	179.5	175.3	171.0	167.5	165.0	162.2	160.8	160.8	160.8	162.2	165.0
162.5°	179.2	175.6	172.1	169.3	167.1	165.0	164.0	164.0	164.0	165.0	167.1
165°	178.5	176.0	173.2	170.7	169.3	167.5	166.8	167.1	166.8	167.5	169.3
167.5°	178.1	176.0	173.9	172.1	171.0	169.6	169.3	169.6	169.3	169.6	171.0
170°	177.0	175.6	173.9	173.2	172.4	171.4	171.0	171.7	171.0	171.4	172.4
172.5°	176.7	175.6	174.2	173.9	173.5	172.8	172.8	173.2	172.8	172.8	173.5
175°	176.0	175.3	174.6	174.2	174.2	173.5	173.9	174.2	173.9	173.5	174.2
177.5°	175.6	174.9	174.6	174.6	174.6	174.2	174.6	174.9	174.6	174.2	174.6
180°	174.6	174.6	174.6	174.6	174.6	174.6	174.6	174.6	174.6	174.6	174.6



TEST NUMBER: P831104

CATALOG NUMBER: S123DIP-S1000D365U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9
2.5°	2752.1	2726.2	2700.2	2680.3	2660.3	2626.4	2592.4	2584.4	2576.5	2565.2	2553.8
5°	2609.7	2545.9	2482.0	2424.7	2367.5	2322.9	2278.4	2249.1	2219.8	2198.5	2177.2
7.5°	2443.4	2347.6	2251.7	2183.9	2116.0	2051.5	1986.9	1966.3	1945.7	1917.7	1889.8
10°	2282.4	2176.6	2070.8	1982.3	1893.8	1830.5	1767.3	1742.0	1716.8	1681.5	1646.2
12.5°	2138.6	2022.8	1907.1	1817.9	1728.7	1667.5	1606.3	1569.7	1533.1	1513.1	1493.2
15°	1988.2	1864.5	1740.7	1658.2	1575.7	1520.5	1465.2	1433.3	1401.4	1382.1	1362.8
17.5°	1855.2	1732.7	1610.3	1531.1	1451.9	1401.4	1350.8	1322.8	1294.9	1280.2	1265.6
20°	1728.7	1609.0	1489.2	1412.0	1334.8	1293.6	1252.3	1234.3	1216.4	1204.4	1192.4
22.5°	1613.0	1495.2	1377.4	1311.5	1245.6	1212.4	1179.1	1166.5	1153.8	1143.8	1133.9
25°	1497.2	1392.0	1286.9	1231.0	1175.1	1147.8	1120.5	1107.9	1095.3	1085.3	1075.3
27.5°	1402.7	1302.2	1201.7	1153.8	1105.9	1084.6	1063.3	1053.3	1043.4	1034.0	1024.7
30°	1310.9	1221.0	1131.2	1089.9	1048.7	1029.4	1010.1	1000.1	990.1	981.5	972.8
32.5°	1225.7	1148.5	1071.3	1033.4	995.5	979.5	963.5	951.5	939.6	932.9	926.2
35°	1144.5	1075.3	1006.1	974.8	943.5	927.6	911.6	901.6	891.6	886.3	881.0
37.5°	1075.3	1013.4	951.5	921.6	891.6	876.3	861.0	852.4	843.7	841.7	839.7
40°	1004.8	951.5	898.3	869.0	839.7	826.4	813.1	807.8	802.5	801.2	799.8
42.5°	946.2	894.3	842.4	815.8	789.2	777.9	766.6	763.9	761.2	763.2	765.2
45°	878.3	835.1	791.8	767.2	742.6	733.3	724.0	722.0	720.0	724.0	728.0
47.5°	821.1	781.2	741.3	718.0	694.7	688.0	681.4	680.7	680.0	685.4	690.7
50°	762.6	724.0	685.4	666.7	648.1	642.1	636.1	638.1	640.1	648.8	657.4
52.5°	708.0	672.1	636.1	618.8	601.5	597.5	593.5	598.2	602.9	612.2	621.5
55°	648.1	615.5	582.9	569.6	556.3	552.3	548.3	557.6	566.9	575.6	584.2
57.5°	590.9	562.3	533.7	521.7	509.7	509.0	508.4	517.0	525.7	535.0	544.3
60°	529.7	505.7	481.8	472.4	463.1	464.5	465.8	475.8	485.7	493.1	500.4
62.5°	473.8	453.8	433.8	425.2	416.5	419.9	423.2	433.2	443.2	451.8	460.5
65°	417.9	401.2	384.6	378.6	372.6	377.3	381.9	390.6	399.2	405.2	411.2
67.5°	364.6	350.7	336.7	332.0	327.4	332.0	336.7	345.3	354.0	360.0	366.0
70°	308.7	297.4	286.1	282.8	279.5	284.8	290.1	297.4	304.8	310.7	316.7
72.5°	256.8	248.2	239.5	238.9	238.2	242.9	247.5	254.9	262.2	266.2	270.2
75°	206.3	201.6	197.0	196.3	195.6	200.3	204.9	208.9	212.9	216.3	219.6
77.5°	161.0	157.0	153.0	153.7	154.4	157.7	161.0	165.0	169.0	171.0	173.0
80°	114.5	113.1	111.8	113.1	114.5	117.1	119.8	122.4	125.1	126.4	127.8
82.5°	78.5	77.2	75.9	77.9	79.8	81.8	83.8	85.8	87.8	88.5	89.2
85°	45.2	47.2	49.2	49.2	49.2	49.9	50.6	51.2	51.9	51.2	50.6
87.5°	21.3	22.0	22.6	22.6	22.6	23.3	24.0	24.0	24.0	23.3	22.6
90°	3.9	4.6	5.7	6.7	7.8	8.8	8.5	8.8	9.2	9.5	10.2
92.5°	18.0	24.4	35.7	54.4	72.8	65.7	49.1	35.0	27.2	23.7	21.2
95°	32.2	45.9	76.0	128.6	186.6	209.6	170.0	127.2	86.2	67.5	54.8
97.5°	37.1	52.3	82.0	143.1	240.7	322.3	333.2	292.2	220.5	173.9	133.6
100°	42.4	56.2	80.9	133.2	226.2	334.7	404.3	416.6	388.0	346.7	296.5
102.5°	48.4	60.8	82.3	124.7	205.0	311.7	407.8	458.0	464.0	444.2	417.0
105°	55.1	66.1	85.2	121.6	188.4	284.1	385.5	459.4	494.7	501.4	492.3
107.5°	62.5	72.8	89.8	120.9	176.3	259.7	353.7	438.2	493.7	521.2	530.8
110°	70.0	79.9	95.8	122.6	170.0	239.6	324.1	405.0	470.0	514.5	539.3



TEST NUMBER: P831104

CATALOG NUMBER: S123DIP-S1000D365U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	77.7	87.3	101.8	126.2	166.4	226.2	298.3	372.1	438.9	490.1	523.7
115°	85.5	95.1	108.5	130.0	166.1	217.3	278.5	343.8	405.3	457.3	495.8
117.5°	93.3	102.1	115.6	135.0	166.4	211.3	265.4	321.9	376.4	424.1	464.0
120°	100.7	109.5	122.3	140.6	167.9	207.4	255.5	305.3	353.0	395.4	431.1
122.5°	107.4	117.0	129.3	145.9	170.3	205.0	247.4	292.2	334.3	372.8	405.3
125°	114.1	123.7	136.1	151.6	172.8	202.8	240.7	280.9	319.5	353.4	381.7
127.5°	120.5	130.0	142.1	156.2	175.6	201.8	234.3	270.7	305.7	336.8	362.9
130°	126.2	135.7	147.4	160.8	178.5	200.7	229.3	261.1	293.0	321.6	345.6
132.5°	131.5	140.6	152.0	165.0	180.6	200.4	224.8	252.3	280.9	307.1	329.7
135°	136.1	145.6	156.5	168.6	182.7	200.0	220.9	244.5	269.6	292.6	312.7
137.5°	140.3	149.1	159.7	171.4	184.1	199.3	217.3	237.1	258.3	278.8	296.8
140°	143.8	152.7	162.9	173.5	185.5	199.0	214.1	230.8	248.8	265.7	280.9
142.5°	147.4	155.5	165.4	175.6	186.6	198.2	211.3	224.8	239.6	253.7	266.4
145°	150.2	158.3	167.5	177.0	186.9	197.5	208.8	220.2	231.8	243.1	253.4
147.5°	153.7	160.8	169.3	178.1	186.9	196.5	206.4	216.3	225.8	235.4	242.8
150°	156.5	162.9	171.0	178.5	186.9	195.1	203.9	212.0	220.2	227.6	234.3
152.5°	159.4	165.4	172.1	179.2	185.9	193.3	201.1	208.1	214.9	221.2	226.5
155°	162.6	167.5	173.5	179.2	185.2	191.2	198.2	204.3	209.9	215.2	219.4
157.5°	165.4	169.3	174.2	179.5	184.1	189.4	195.1	200.0	205.0	209.2	212.7
160°	167.5	171.0	175.3	179.5	183.4	187.3	191.9	196.5	200.4	203.9	206.4
162.5°	169.3	172.1	175.6	179.2	182.0	185.2	188.7	192.2	195.4	198.6	200.7
165°	170.7	173.2	176.0	178.5	180.6	183.1	185.9	188.7	190.8	193.3	195.1
167.5°	172.1	173.9	176.0	178.1	179.2	180.9	183.1	185.5	187.3	188.7	190.1
170°	173.2	173.9	175.6	177.0	177.8	178.8	180.6	182.3	183.4	184.8	185.5
172.5°	173.9	174.2	175.6	176.7	176.7	177.0	178.1	179.5	180.2	181.3	181.6
175°	174.2	174.6	175.3	176.0	175.6	175.6	176.3	177.0	177.4	178.1	178.1
177.5°	174.6	174.6	174.9	175.6	174.9	174.6	174.9	175.3	175.6	176.0	176.0
180°	174.6	174.6	174.6	174.6	174.6	174.6	174.6	174.6	174.6	174.6	174.6



TEST NUMBER: P831104

CATALOG NUMBER: S123DIP-S1000D365U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2867.9	2867.9	2867.9	2867.9
2.5°	2549.2	2544.5	2525.9	2507.3
5°	2161.2	2145.3	2140.0	2134.6
7.5°	1888.4	1887.1	1859.2	1831.2
10°	1648.2	1650.2	1624.9	1599.6
12.5°	1476.5	1459.9	1457.9	1455.9
15°	1347.5	1332.1	1329.5	1326.8
17.5°	1256.3	1247.0	1244.3	1241.7
20°	1187.1	1181.8	1177.1	1172.5
22.5°	1127.2	1120.5	1116.6	1112.6
25°	1069.3	1063.3	1062.0	1060.7
27.5°	1017.4	1010.1	1010.1	1010.1
30°	968.2	963.5	961.5	959.5
32.5°	922.3	918.3	918.3	918.3
35°	879.0	877.0	874.3	871.7
37.5°	839.7	839.7	838.4	837.1
40°	801.8	803.8	803.8	803.8
42.5°	767.2	769.2	769.2	769.2
45°	731.3	734.6	735.9	737.3
47.5°	696.0	701.3	702.7	704.0
50°	661.4	665.4	666.1	666.7
52.5°	626.1	630.8	634.1	637.5
55°	588.9	593.5	595.5	597.5
57.5°	549.0	553.6	554.3	555.0
60°	505.0	509.7	511.0	512.4
62.5°	463.1	465.8	467.1	468.4
65°	415.2	419.2	421.9	424.5
67.5°	369.3	372.6	372.6	372.6
70°	318.1	319.4	321.4	323.4
72.5°	270.8	271.5	271.5	271.5
75°	220.9	222.2	222.9	223.6
77.5°	173.7	174.3	174.3	174.3
80°	127.1	126.4	126.4	126.4
82.5°	87.2	85.2	85.2	85.2
85°	49.9	49.2	49.9	50.6
87.5°	22.6	22.6	22.6	22.6
90°	9.9	10.2	10.6	10.2
92.5°	20.5	19.1	19.4	18.7
95°	48.1	44.9	42.4	41.0
97.5°	109.9	96.5	88.0	84.1
100°	260.8	235.0	221.2	221.6
102.5°	391.2	372.1	361.2	350.9
105°	476.0	462.6	451.3	449.5
107.5°	528.7	522.3	517.7	513.8
110°	549.2	552.0	551.3	550.6



TEST NUMBER: P831104

CATALOG NUMBER: S123DIP-S1000D365U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	543.9	554.1	557.6	558.0
115°	522.3	537.8	544.9	546.7
117.5°	491.6	508.9	519.5	521.9
120°	459.0	478.8	487.3	489.4
122.5°	429.4	446.7	456.2	459.0
125°	404.3	419.8	428.7	431.1
127.5°	383.4	396.8	405.0	407.1
130°	364.3	377.1	384.5	387.3
132.5°	347.0	359.7	366.1	367.9
135°	330.1	340.7	347.0	349.5
137.5°	311.7	322.6	327.9	330.1
140°	294.4	304.3	309.9	309.6
142.5°	277.4	285.9	290.8	290.5
145°	262.2	269.6	272.5	273.2
147.5°	249.8	255.1	258.0	258.3
150°	239.6	243.5	245.6	245.6
152.5°	230.4	233.9	235.0	235.0
155°	222.6	225.5	226.2	226.5
157.5°	215.6	217.7	218.4	218.4
160°	208.8	211.0	211.0	210.6
162.5°	202.1	203.9	203.9	203.5
165°	196.5	197.9	197.5	197.5
167.5°	190.8	191.9	191.5	191.5
170°	185.9	186.6	186.2	186.2
172.5°	181.6	182.3	181.6	181.3
175°	178.1	178.5	178.1	177.8
177.5°	175.6	176.0	175.3	175.3
180°	174.6	174.6	174.6	174.6



TEST NUMBER: P831104

CATALOG NUMBER: S123DIP-S1000D365U835-4F0-1E-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	17.78	18.89	18.46	19.59	20.40	20.02	21.13	20.70	21.82	22.64
	3H	19.44	20.44	20.14	21.15	21.99	21.46	22.46	22.15	23.16	24.01
	4H	20.03	20.97	20.75	21.69	22.55	21.92	22.86	22.64	23.58	24.44
	6H	20.42	21.28	21.14	22.01	22.88	22.21	23.08	22.94	23.80	24.67
	8H	20.52	21.35	21.26	22.09	22.97	22.28	23.10	23.02	23.85	24.72
	12H	20.57	21.36	21.32	22.10	23.00	22.30	23.09	23.05	23.83	24.73
4H	2H	18.38	19.32	19.10	20.04	20.90	20.21	21.15	20.93	21.87	22.72
	3H	20.23	21.02	20.96	21.77	22.64	21.85	22.63	22.58	23.38	24.26
	4H	20.94	21.65	21.69	22.41	23.31	22.44	23.15	23.19	23.91	24.81
	6H	21.43	22.04	22.19	22.82	23.74	22.86	23.47	23.63	24.25	25.17
	8H	21.57	22.14	22.34	22.92	23.85	22.98	23.55	23.75	24.33	25.25
	12H	21.65	22.16	22.44	22.96	23.89	23.03	23.55	23.82	24.35	25.28
8H	4H	21.23	21.80	21.99	22.57	23.50	22.57	23.14	23.34	23.91	24.84
	6H	21.82	22.30	22.62	23.12	24.04	23.08	23.55	23.88	24.37	25.30
	8H	22.03	22.45	22.84	23.27	24.21	23.26	23.68	24.07	24.50	25.44
	12H	22.17	22.54	22.98	23.34	24.35	23.37	23.74	24.18	24.55	25.55
12H	4H	21.24	21.75	22.03	22.55	23.48	22.55	23.07	23.34	23.87	24.80
	6H	21.87	22.30	22.69	23.11	24.06	23.09	23.51	23.90	24.33	25.28
	8H	22.12	22.49	22.93	23.30	24.30	23.30	23.67	24.12	24.48	25.48