

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: P831128

Luminaire Tested: S123DIP-S1000D585U830-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831128
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-S1000D585U830-4F0-1E-UDD-G4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: -

Summary

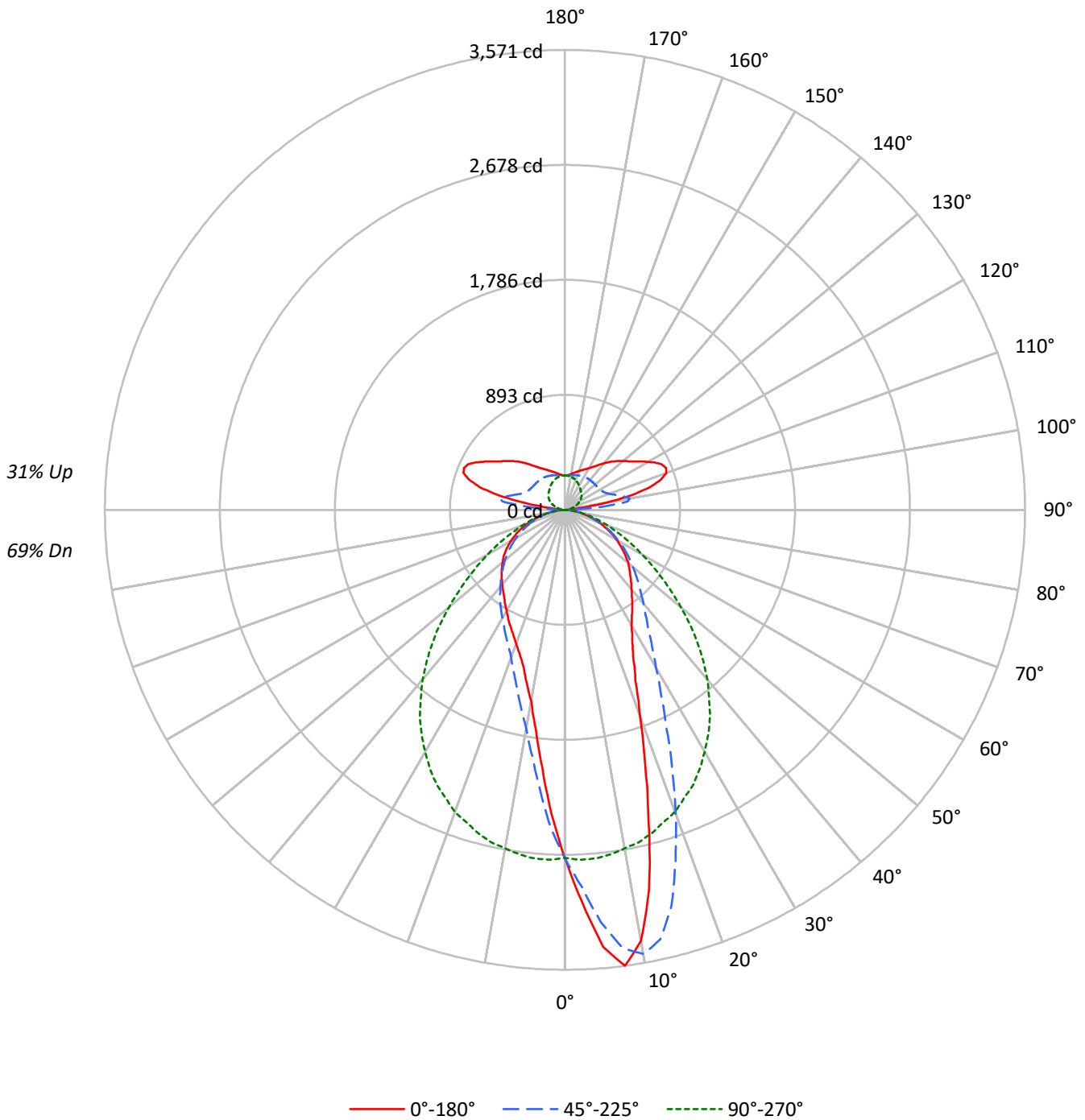
Lumens per Lamp: N/A
Luminaire Lumens: 6344.5 lumens
Efficiency: N/A
Efficacy: 126.1 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 50.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P831128

CATALOG NUMBER: S123DIP-S1000D585U830-4F0-1E-UDD-G4

Luminous Intensity Polar Plot





TEST NUMBER: P831128

CATALOG NUMBER: S123DIP-S1000D585U830-4F0-1E-UDD-G4

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	105	105	105	105	94	94	94	83	83	83	73	73	73	69				
1	103	98	95	91	97	93	90	87	83	81	78	74	72	71	66	64	63	59				
2	94	87	81	76	89	82	77	73	74	70	66	66	63	60	59	56	54	51				
3	86	77	70	64	81	73	67	62	66	61	57	59	55	52	53	50	47	44				
4	80	69	61	55	75	66	59	53	59	54	49	53	49	45	48	44	42	39				
5	74	62	54	48	69	59	52	47	54	48	43	49	44	40	44	40	37	34				
6	68	56	48	43	64	54	47	41	49	43	39	44	40	36	40	36	33	31				
7	64	51	44	38	60	49	42	37	45	39	35	41	36	32	37	33	30	28				
8	59	47	40	34	56	45	38	33	41	35	31	38	33	29	34	30	27	25				
9	56	43	36	31	53	42	35	30	38	32	28	35	30	27	32	28	25	23				
10	52	40	33	28	49	39	32	28	36	30	26	33	28	25	30	26	23	21				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	29096	29096	29096	29096	29096
5°	36798	34731	29356	23658	21740
10°	37154	38278	29161	18859	16479
15°	27984	35539	28962	15970	13936
20°	19498	28758	28593	13966	12659
25°	14867	22116	27962	12849	11873
30°	12862	17571	26956	12059	11241
35°	11934	14834	25796	11489	10796
40°	11297	13307	24164	10946	10645
45°	10922	12317	22092	10520	10578
50°	10734	11531	19639	10134	10523
55°	10335	10958	17231	9770	10569
60°	9965	10342	14852	9425	10396
65°	9360	9760	12811	9057	10190
70°	8645	9020	10895	8447	9593
75°	7827	8085	9337	7852	8763
80°	6453	7073	7389	6843	7389
85°	5113	5730	5422	5805	5891

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 25224 cd/sqm



TEST NUMBER: P831128

CATALOG NUMBER: S123DIP-S1000D585U830-4F0-1E-UDD-G4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	255.6	4.0
10°-20°	635.8	10.0
20°-30°	752.8	11.9
30°-40°	756.9	11.9
40°-50°	694.4	10.9
50°-60°	573.2	9.0
60°-70°	405.4	6.4
70°-80°	216.4	3.4
80°-90°	56.4	0.9
90°-100°	144.1	2.3
100°-110°	421.9	6.7
110°-120°	412.0	6.5
120°-130°	328.1	5.2
130°-140°	258.9	4.1
140°-150°	193.1	3.0
150°-160°	134.7	2.1
160°-170°	79.1	1.2
170°-180°	25.7	0.4
0°-30°	1644.1	25.9
0°-40°	2401.0	37.8
0°-60°	3668.6	57.8
0°-90°	4346.8	68.5
90°-120°	978.1	15.4
90°-150°	1758.2	27.7
90°-180°	1998.0	31.5
0°-180°	6344.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2703	2703	2703	2703	2703	
5°	3406	3214	2717	2190	2012	324
15°	2511	3189	2599	1433	1251	694
25°	1252	1862	2354	1082	1000	591
35°	908	1129	1963	874	822	571
45°	718	809	1451	691	695	556
55°	551	584	918	521	563	493
65°	368	383	503	356	400	365
75°	188	194	224	189	211	198
85°	41	46	44	47	48	46
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	



TEST NUMBER: P831128

CATALOG NUMBER: S123DIP-S1000D585U830-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1
2.5°	3046.8	3043.7	3040.5	3024.9	3009.2	3001.7	2994.1	2971.6	2949.0	2923.9	2898.8
5°	3405.6	3414.3	3423.1	3413.1	3403.1	3372.3	3341.6	3300.8	3260.1	3214.3	3168.5
7.5°	3571.1	3576.2	3581.2	3574.9	3568.6	3560.5	3552.3	3515.9	3479.6	3432.5	3385.5
10°	3399.3	3410.6	3421.9	3446.3	3470.8	3498.4	3526.0	3521.0	3515.9	3502.1	3488.4
12.5°	3021.7	3035.5	3049.3	3098.2	3147.2	3209.9	3272.6	3326.5	3380.5	3418.1	3455.7
15°	2511.2	2549.5	2587.7	2632.3	2676.8	2769.0	2861.2	2974.7	3088.2	3189.2	3290.2
17.5°	2068.4	2082.9	2097.3	2144.9	2192.6	2308.6	2424.7	2555.7	2686.8	2854.3	3021.7
20°	1702.2	1715.3	1728.5	1791.2	1853.9	1944.9	2035.8	2183.2	2330.6	2510.6	2690.6
22.5°	1430.0	1450.7	1471.4	1506.5	1541.6	1628.8	1716.0	1847.0	1978.1	2176.9	2375.7
25°	1251.8	1266.9	1281.9	1303.3	1324.6	1394.2	1463.8	1571.7	1679.6	1862.1	2044.6
27.5°	1130.2	1136.4	1142.7	1164.0	1185.4	1230.5	1275.7	1368.5	1461.3	1616.2	1771.1
30°	1034.8	1039.2	1043.6	1062.4	1081.3	1112.0	1142.7	1209.8	1276.9	1413.7	1550.4
32.5°	968.4	971.5	974.6	989.1	1003.5	1025.4	1047.4	1096.3	1145.2	1258.1	1371.0
35°	908.2	910.0	911.9	922.6	933.2	949.5	965.9	1002.9	1039.9	1128.9	1218.0
37.5°	855.5	858.0	860.5	866.8	873.0	887.5	901.9	931.4	960.8	1029.2	1097.6
40°	804.0	808.4	812.8	817.2	821.6	833.5	845.4	868.0	890.6	947.0	1003.5
42.5°	760.1	764.5	768.9	770.8	772.7	779.6	786.5	807.2	827.9	869.9	911.9
45°	717.5	719.4	721.3	723.1	725.0	730.7	736.3	754.5	772.7	809.1	845.4
47.5°	678.6	678.6	678.6	679.9	681.1	686.1	691.1	704.3	717.5	745.7	773.9
50°	641.0	641.0	641.0	639.1	637.2	640.3	643.5	653.5	663.6	688.6	713.7
52.5°	595.8	595.8	595.8	596.4	597.1	597.1	597.1	605.9	614.6	637.2	659.8
55°	550.7	553.2	555.7	553.8	551.9	553.2	554.4	560.1	565.7	583.9	602.1
57.5°	505.5	506.8	508.0	507.4	506.8	507.4	508.0	513.0	518.0	531.8	545.6
60°	462.9	462.9	462.9	461.6	460.3	461.6	462.9	465.4	467.9	480.4	493.0
62.5°	415.2	415.8	416.4	417.1	417.7	416.4	415.2	418.3	421.5	430.9	440.3
65°	367.5	368.2	368.8	370.7	372.5	371.3	370.0	373.2	376.3	383.2	390.1
67.5°	324.9	323.6	322.4	323.0	323.6	325.5	327.4	328.0	328.6	336.2	343.7
70°	274.7	276.0	277.2	276.6	276.0	276.6	277.2	279.1	281.0	286.6	292.3
72.5°	229.5	230.2	230.8	230.8	230.8	232.1	233.3	235.2	237.1	240.2	243.3
75°	188.2	188.2	188.2	189.4	190.7	191.3	191.9	191.9	191.9	194.4	196.9
77.5°	143.0	146.1	149.3	148.6	148.0	149.3	150.5	152.4	154.3	155.5	156.8
80°	104.1	104.1	104.1	104.7	105.4	107.2	109.1	110.4	111.6	114.1	116.7
82.5°	66.5	67.1	67.7	69.6	71.5	72.8	74.0	75.9	77.8	77.8	77.8
85°	41.4	40.1	38.9	40.1	41.4	42.6	43.9	44.5	45.2	46.4	47.7
87.5°	20.1	20.1	20.1	20.1	20.1	20.7	21.3	21.3	21.3	21.3	21.3
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



TEST NUMBER: P831128

CATALOG NUMBER: S123DIP-S1000D585U830-4F0-1E-UDD-G4

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



TEST NUMBER: P831128

CATALOG NUMBER: S123DIP-S1000D585U830-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1
2.5°	2891.3	2883.8	2856.2	2828.6	2797.2	2765.8	2742.6	2719.4	2684.9	2650.4	2622.2
5°	3133.4	3098.2	3039.9	2981.6	2902.6	2823.5	2770.2	2716.9	2645.4	2573.9	2516.9
7.5°	3325.3	3265.1	3183.5	3102.0	2998.5	2895.0	2797.2	2699.4	2590.2	2481.1	2392.0
10°	3447.6	3406.8	3312.7	3218.7	3080.1	2941.5	2804.7	2668.0	2527.5	2387.0	2269.1
12.5°	3459.5	3463.3	3376.7	3290.2	3133.4	2976.6	2810.4	2644.2	2467.3	2290.4	2153.1
15°	3354.8	3419.4	3371.7	3324.0	3166.0	3007.9	2803.5	2599.0	2395.2	2191.4	2032.7
17.5°	3160.3	3298.9	3305.8	3312.7	3154.7	2996.6	2770.2	2543.8	2313.0	2082.2	1915.4
20°	2895.0	3099.5	3169.7	3240.0	3111.4	2982.8	2739.5	2496.2	2237.8	1979.4	1804.4
22.5°	2624.1	2872.5	3001.0	3129.6	3034.3	2938.9	2679.9	2420.9	2148.1	1875.3	1697.8
25°	2315.5	2586.5	2784.0	2981.6	2923.3	2864.9	2609.7	2354.4	2064.0	1773.7	1592.4
27.5°	2046.5	2321.8	2560.1	2798.5	2785.9	2773.4	2520.0	2266.6	1969.3	1672.1	1497.1
30°	1806.9	2063.4	2330.0	2596.5	2627.2	2658.0	2413.4	2168.8	1870.9	1573.0	1404.2
32.5°	1594.9	1818.8	2104.8	2390.8	2451.0	2511.2	2290.4	2069.7	1774.9	1480.1	1317.7
35°	1421.2	1624.4	1910.4	2196.4	2271.6	2346.9	2155.0	1963.1	1675.8	1388.6	1233.7
37.5°	1267.5	1437.5	1716.6	1995.7	2087.9	2180.1	2008.2	1836.4	1567.3	1298.3	1155.9
40°	1140.2	1276.9	1533.4	1790.0	1896.6	2003.2	1861.5	1719.7	1464.5	1209.2	1078.1
42.5°	1033.6	1155.3	1387.9	1620.6	1722.9	1825.1	1705.3	1585.5	1358.5	1131.4	1011.6
45°	942.6	1039.9	1251.2	1462.6	1559.8	1657.0	1554.1	1451.3	1251.2	1051.1	939.5
47.5°	857.3	940.8	1121.4	1302.0	1388.6	1475.1	1394.8	1314.6	1145.2	975.9	874.9
50°	780.8	847.9	1006.0	1164.0	1239.3	1314.6	1243.7	1172.8	1033.6	894.4	806.5
52.5°	714.4	768.9	901.3	1033.6	1098.2	1162.8	1101.9	1041.1	930.7	820.3	743.8
55°	648.5	694.9	809.7	924.5	968.4	1012.3	965.2	918.2	829.1	740.1	675.5
57.5°	587.0	628.4	722.5	816.6	850.5	884.3	841.7	799.0	731.9	664.8	610.9
60°	526.8	560.7	639.1	717.5	738.2	758.9	724.4	689.9	642.9	595.8	547.5
62.5°	471.0	501.7	560.1	618.4	632.2	646.0	619.6	593.3	557.6	521.8	484.2
65°	413.3	436.5	484.2	531.8	540.6	549.4	526.2	503.0	476.0	449.1	421.5
67.5°	360.0	376.3	415.2	454.1	454.7	455.3	436.5	417.7	402.6	387.6	365.6
70°	307.9	323.6	349.3	375.1	375.7	376.3	361.3	346.2	334.9	323.6	307.3
72.5°	254.6	265.9	285.4	304.8	303.6	302.3	292.9	283.5	274.7	265.9	254.0
75°	206.3	215.7	228.9	242.1	238.3	234.6	229.5	224.5	217.0	209.5	202.0
77.5°	162.4	168.1	175.6	183.1	180.6	178.1	173.7	169.3	163.7	158.0	154.9
80°	119.2	121.7	126.7	131.7	130.5	129.2	124.2	119.2	117.9	116.7	112.3
82.5°	80.9	84.0	85.3	86.6	85.9	85.3	81.5	77.8	76.5	75.3	74.6
85°	48.3	48.9	49.5	50.2	48.3	46.4	45.2	43.9	43.9	43.9	43.3
87.5°	22.0	22.6	22.6	22.6	22.0	21.3	20.1	18.8	19.4	20.1	20.1
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: P831128

CATALOG NUMBER: S123DIP-S1000D585U830-4F0-1E-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: P831128

CATALOG NUMBER: S123DIP-S1000D585U830-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1
2.5°	2594.0	2569.5	2545.1	2526.3	2507.4	2475.5	2443.5	2436.0	2428.4	2417.8	2407.1
5°	2459.8	2399.6	2339.4	2285.4	2231.5	2189.5	2147.4	2119.9	2092.3	2072.2	2052.1
7.5°	2303.0	2212.7	2122.4	2058.4	1994.4	1933.6	1872.7	1853.3	1833.9	1807.5	1781.2
10°	2151.2	2051.5	1951.8	1868.4	1784.9	1725.4	1665.8	1641.9	1618.1	1584.9	1551.6
12.5°	2015.7	1906.6	1797.5	1713.4	1629.4	1571.7	1514.0	1479.5	1445.0	1426.2	1407.4
15°	1874.0	1757.3	1640.7	1562.9	1485.2	1433.1	1381.0	1350.9	1320.8	1302.6	1284.5
17.5°	1748.6	1633.2	1517.8	1443.1	1368.5	1320.8	1273.2	1246.8	1220.5	1206.7	1192.9
20°	1629.4	1516.5	1403.6	1330.9	1258.1	1219.2	1180.3	1163.4	1146.5	1135.2	1123.9
22.5°	1520.3	1409.3	1298.3	1236.2	1174.1	1142.7	1111.4	1099.4	1087.5	1078.1	1068.7
25°	1411.1	1312.1	1213.0	1160.3	1107.6	1081.9	1056.2	1044.2	1032.3	1022.9	1013.5
27.5°	1322.1	1227.4	1132.7	1087.5	1042.4	1022.3	1002.2	992.8	983.4	974.6	965.9
30°	1235.5	1150.9	1066.2	1027.3	988.4	970.2	952.1	942.6	933.2	925.1	916.9
32.5°	1155.3	1082.5	1009.8	974.0	938.3	923.2	908.2	896.9	885.6	879.3	873.0
35°	1078.7	1013.5	948.3	918.8	889.3	874.3	859.2	849.8	840.4	835.4	830.4
37.5°	1013.5	955.2	896.9	868.6	840.4	826.0	811.6	803.4	795.3	793.4	791.5
40°	947.0	896.9	846.7	819.1	791.5	779.0	766.4	761.4	756.4	755.1	753.9
42.5°	891.8	842.9	794.0	768.9	743.8	733.2	722.5	720.0	717.5	719.4	721.3
45°	827.9	787.1	746.3	723.1	699.9	691.1	682.4	680.5	678.6	682.4	686.1
47.5°	773.9	736.3	698.7	676.7	654.8	648.5	642.2	641.6	641.0	646.0	651.0
50°	718.7	682.4	646.0	628.4	610.9	605.2	599.6	601.5	603.3	611.5	619.6
52.5°	667.3	633.4	599.6	583.3	567.0	563.2	559.4	563.8	568.2	577.0	585.8
55°	610.9	580.1	549.4	536.9	524.3	520.6	516.8	525.6	534.4	542.5	550.7
57.5°	556.9	530.0	503.0	491.7	480.4	479.8	479.2	487.3	495.5	504.2	513.0
60°	499.2	476.7	454.1	445.3	436.5	437.8	439.0	448.4	457.8	464.7	471.6
62.5°	446.5	427.7	408.9	400.8	392.6	395.7	398.9	408.3	417.7	425.9	434.0
65°	393.9	378.2	362.5	356.9	351.2	355.6	360.0	368.2	376.3	382.0	387.6
67.5°	343.7	330.5	317.4	313.0	308.6	313.0	317.4	325.5	333.7	339.3	344.9
70°	291.0	280.3	269.7	266.5	263.4	268.4	273.4	280.3	287.2	292.9	298.5
72.5°	242.1	233.9	225.8	225.2	224.5	228.9	233.3	240.2	247.1	250.9	254.6
75°	194.4	190.0	185.6	185.0	184.4	188.8	193.2	196.9	200.7	203.8	207.0
77.5°	151.8	148.0	144.3	144.9	145.5	148.6	151.8	155.5	159.3	161.2	163.1
80°	107.9	106.6	105.4	106.6	107.9	110.4	112.9	115.4	117.9	119.2	120.4
82.5°	74.0	72.8	71.5	73.4	75.3	77.1	79.0	80.9	82.8	83.4	84.0
85°	42.6	44.5	46.4	46.4	46.4	47.0	47.7	48.3	48.9	48.3	47.7
87.5°	20.1	20.7	21.3	21.3	21.3	22.0	22.6	22.6	22.6	22.0	21.3
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: P831128

CATALOG NUMBER: S123DIP-S1000D585U830-4F0-1E-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: P831128

CATALOG NUMBER: S123DIP-S1000D585U830-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2703.1	2703.1	2703.1	2703.1
2.5°	2402.7	2398.3	2380.8	2363.2
5°	2037.1	2022.0	2017.0	2012.0
7.5°	1779.9	1778.7	1752.3	1726.0
10°	1553.5	1555.4	1531.6	1507.7
12.5°	1391.7	1376.0	1374.1	1372.3
15°	1270.0	1255.6	1253.1	1250.6
17.5°	1184.1	1175.3	1172.8	1170.3
20°	1118.9	1113.9	1109.5	1105.1
22.5°	1062.4	1056.2	1052.4	1048.6
25°	1007.9	1002.2	1001.0	999.7
27.5°	959.0	952.1	952.1	952.1
30°	912.5	908.2	906.3	904.4
32.5°	869.3	865.5	865.5	865.5
35°	828.5	826.6	824.1	821.6
37.5°	791.5	791.5	790.2	789.0
40°	755.7	757.6	757.6	757.6
42.5°	723.1	725.0	725.0	725.0
45°	689.3	692.4	693.7	694.9
47.5°	656.0	661.0	662.3	663.6
50°	623.4	627.2	627.8	628.4
52.5°	590.2	594.6	597.7	600.8
55°	555.1	559.4	561.3	563.2
57.5°	517.4	521.8	522.4	523.1
60°	476.0	480.4	481.7	482.9
62.5°	436.5	439.0	440.3	441.5
65°	391.4	395.1	397.6	400.1
67.5°	348.1	351.2	351.2	351.2
70°	299.8	301.0	302.9	304.8
72.5°	255.3	255.9	255.9	255.9
75°	208.2	209.5	210.1	210.7
77.5°	163.7	164.3	164.3	164.3
80°	119.8	119.2	119.2	119.2
82.5°	82.2	80.3	80.3	80.3
85°	47.0	46.4	47.0	47.7
87.5°	21.3	21.3	21.3	21.3
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: P831128

CATALOG NUMBER: S123DIP-S1000D585U830-4F0-1E-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: P831128

CATALOG NUMBER: S123DIP-S1000D585U830-4F0-1E-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	16.86	17.86	17.65	18.66	19.65	19.09	20.10	19.88	20.90	21.88
	3H	18.52	19.41	19.32	20.23	21.24	20.53	21.43	21.33	22.24	23.25
	4H	19.10	19.94	19.92	20.77	21.79	20.99	21.83	21.80	22.65	23.68
	6H	19.48	20.26	20.31	21.09	22.12	21.27	22.05	22.10	22.88	23.92
	8H	19.58	20.32	20.42	21.17	22.20	21.33	22.08	22.18	22.92	23.96
	12H	19.63	20.33	20.47	21.17	22.24	21.36	22.06	22.20	22.91	23.97
4H	2H	17.45	18.29	18.27	19.12	20.14	19.27	20.12	20.10	20.94	21.97
	3H	19.29	19.99	20.12	20.85	21.89	20.91	21.61	21.74	22.47	23.50
	4H	19.99	20.63	20.84	21.49	22.55	21.49	22.13	22.34	22.99	24.06
	6H	20.48	21.03	21.34	21.91	22.98	21.91	22.46	22.77	23.34	24.41
	8H	20.62	21.13	21.48	22.00	23.09	22.02	22.54	22.89	23.41	24.49
	12H	20.69	21.15	21.57	22.05	23.13	22.07	22.54	22.96	23.43	24.52
8H	4H	20.27	20.78	21.14	21.66	22.74	21.61	22.13	22.48	23.00	24.08
	6H	20.86	21.29	21.76	22.20	23.29	22.12	22.54	23.01	23.46	24.54
	8H	21.07	21.45	21.98	22.36	23.46	22.30	22.67	23.20	23.58	24.69
	12H	21.20	21.53	22.11	22.43	23.59	22.41	22.74	23.31	23.64	24.79
12H	4H	20.28	20.74	21.16	21.63	22.72	21.59	22.05	22.48	22.95	24.04
	6H	20.91	21.29	21.82	22.20	23.30	22.13	22.51	23.04	23.42	24.52
	8H	21.16	21.49	22.06	22.39	23.54	22.34	22.67	23.25	23.57	24.73