

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: P831067

Luminaire Tested: S123DIP-S1000D1025U940-4F0-1E-UDD-G1

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831067
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-S1000D1025U940-4F0-1E-UDD-G1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 1025 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: -

Summary

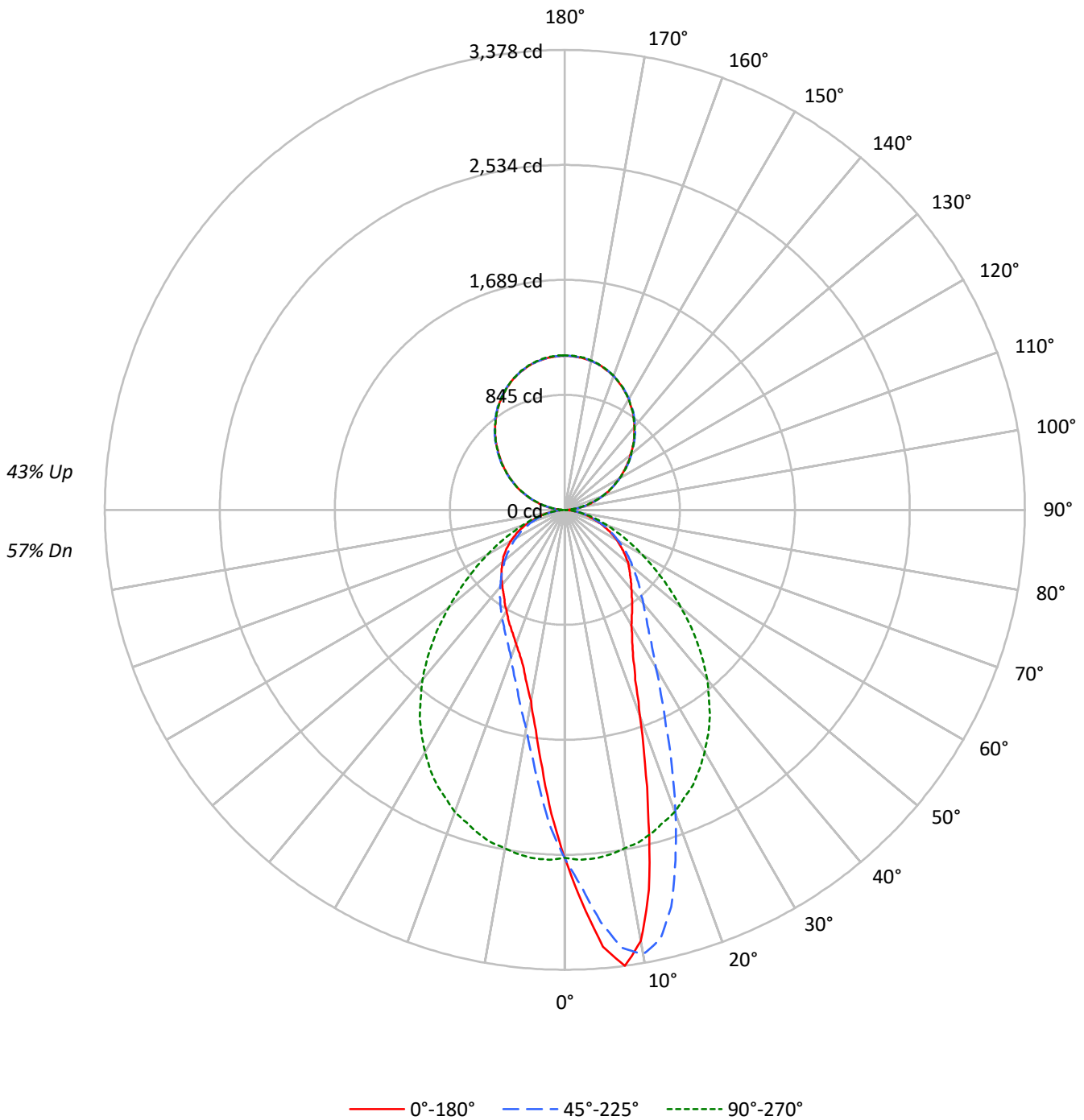
Lumens per Lamp: N/A
Luminaire Lumens: 7253.0 lumens
Efficiency: N/A
Efficacy: 118.9 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 61
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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	57		
1	100	96	92	89	93	89	86	83	77	75	73	66	64	63	56	55	54	49		
2	91	84	78	73	85	79	74	69	68	65	61	59	56	54	50	48	46	42		
3	84	75	68	62	78	70	64	59	61	56	52	53	49	46	45	42	40	36		
4	77	67	59	53	72	63	56	51	55	50	45	47	43	40	41	38	35	32		
5	71	60	52	46	66	56	49	44	49	44	40	43	39	35	37	34	31	28		
6	66	54	46	41	61	51	44	39	45	39	35	39	35	32	34	31	28	25		
7	61	49	42	36	57	46	40	35	41	36	31	36	32	28	31	28	25	23		
8	57	45	38	32	53	43	36	31	38	32	28	33	29	26	29	26	23	21		
9	53	41	34	29	50	39	33	28	35	30	26	31	27	23	27	24	21	19		
10	50	38	31	27	47	36	30	26	32	27	23	29	25	21	25	22	19	18		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	27527	27527	27527	27527	27527
5°	34813	32857	27773	22382	20567
10°	35151	36214	27588	17841	15591
15°	26475	33623	27400	15109	13184
20°	18447	27207	27050	13213	11976
25°	14066	20923	26454	12156	11233
30°	12168	16623	25502	11409	10634
35°	11290	14034	24404	10868	10214
40°	10689	12590	22861	10354	10072
45°	10333	11651	20900	9954	10007
50°	10155	10910	18581	9589	9955
55°	9777	10367	16302	9242	9999
60°	9427	9784	14051	8917	9836
65°	8856	9233	12121	8568	9643
70°	8179	8535	10307	7994	9076
75°	7403	7648	8833	7428	8293
80°	6106	6695	6986	6471	6986
85°	4841	5422	5125	5496	5570

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 23863 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	241.8	3.3
10°-20°	601.5	8.3
20°-30°	712.2	9.8
30°-40°	716.1	9.9
40°-50°	657.0	9.1
50°-60°	542.2	7.5
60°-70°	383.6	5.3
70°-80°	204.8	2.8
80°-90°	54.3	0.7
90°-100°	72.9	1.0
100°-110°	220.8	3.0
110°-120°	375.8	5.2
120°-130°	494.4	6.8
130°-140°	555.8	7.7
140°-150°	546.4	7.5
150°-160°	460.0	6.3
160°-170°	306.2	4.2
170°-180°	107.2	1.5
0°-30°	1555.4	21.4
0°-40°	2271.5	31.3
0°-60°	3470.7	47.9
0°-90°	4113.4	56.7
90°-120°	669.6	9.2
90°-150°	2266.1	31.2
90°-180°	3140.0	43.3
0°-180°	7253.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2557	2557	2557	2557	2557	
5°	3222	3041	2570	2071	1904	307
15°	2376	3017	2459	1356	1183	656
25°	1184	1762	2227	1024	946	559
35°	859	1068	1857	827	777	540
45°	679	765	1373	654	657	526
55°	521	552	869	492	533	466
65°	348	362	476	336	379	346
75°	178	184	212	179	199	187
85°	39	44	42	44	45	44
90°	27	21	1	21	27	15
95°	69	66	52	66	69	70
105°	212	210	200	210	212	225
115°	379	379	378	379	379	376
125°	547	554	554	554	547	490
135°	717	723	718	723	717	552
145°	871	876	871	876	871	544
155°	996	999	998	999	996	459
165°	1083	1084	1087	1084	1083	306
175°	1126	1127	1130	1127	1126	107
180°	1133	1133	1133	1133	1133	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3
2.5°	2882.5	2879.5	2876.6	2861.7	2846.9	2839.8	2832.7	2811.3	2789.9	2766.2	2742.5
5°	3221.9	3230.2	3238.5	3229.0	3219.5	3190.5	3161.4	3122.8	3084.2	3040.9	2997.6
7.5°	3378.5	3383.3	3388.0	3382.1	3376.2	3368.5	3360.7	3326.3	3291.9	3247.4	3202.9
10°	3216.0	3226.6	3237.3	3260.5	3283.6	3309.7	3335.8	3331.1	3326.3	3313.3	3300.2
12.5°	2858.8	2871.8	2884.9	2931.2	2977.4	3036.8	3096.1	3147.1	3198.2	3233.8	3269.4
15°	2375.8	2412.0	2448.2	2490.3	2532.4	2619.6	2706.9	2814.3	2921.7	3017.2	3112.7
17.5°	1956.9	1970.5	1984.2	2029.3	2074.4	2184.1	2293.9	2417.9	2541.9	2700.3	2858.8
20°	1610.4	1622.8	1635.3	1694.6	1753.9	1840.0	1926.0	2065.5	2204.9	2375.2	2545.5
22.5°	1352.8	1372.4	1392.0	1425.2	1458.5	1540.9	1623.4	1747.4	1871.4	2059.5	2247.6
25°	1184.3	1198.6	1212.8	1233.0	1253.2	1319.0	1384.9	1486.9	1589.0	1761.7	1934.3
27.5°	1069.2	1075.2	1081.1	1101.3	1121.4	1164.2	1206.9	1294.7	1382.5	1529.1	1675.6
30°	979.0	983.2	987.3	1005.1	1022.9	1052.0	1081.1	1144.6	1208.1	1337.4	1466.8
32.5°	916.1	919.1	922.1	935.7	949.4	970.1	990.9	1037.2	1083.5	1190.3	1297.1
35°	859.2	861.0	862.7	872.8	882.9	898.3	913.8	948.8	983.8	1068.0	1152.3
37.5°	809.3	811.7	814.1	820.0	825.9	839.6	853.2	881.1	909.0	973.7	1038.4
40°	760.7	764.8	769.0	773.1	777.3	788.6	799.8	821.2	842.6	896.0	949.4
42.5°	719.1	723.3	727.4	729.2	731.0	737.5	744.1	763.6	783.2	823.0	862.7
45°	678.8	680.6	682.4	684.1	685.9	691.3	696.6	713.8	731.0	765.4	799.8
47.5°	642.0	642.0	642.0	643.2	644.4	649.1	653.9	666.3	678.8	705.5	732.2
50°	606.4	606.4	606.4	604.6	602.8	605.8	608.8	618.3	627.8	651.5	675.2
52.5°	563.7	563.7	563.7	564.3	564.9	564.9	564.9	573.2	581.5	602.8	624.2
55°	521.0	523.3	525.7	523.9	522.1	523.3	524.5	529.9	535.2	552.4	569.6
57.5°	478.2	479.4	480.6	480.0	479.4	480.0	480.6	485.4	490.1	503.2	516.2
60°	437.9	437.9	437.9	436.7	435.5	436.7	437.9	440.3	442.6	454.5	466.4
62.5°	392.8	393.4	394.0	394.6	395.2	394.0	392.8	395.8	398.7	407.6	416.5
65°	347.7	348.3	348.9	350.7	352.5	351.3	350.1	353.0	356.0	362.5	369.1
67.5°	307.4	306.2	305.0	305.6	306.2	307.9	309.7	310.3	310.9	318.0	325.2
70°	259.9	261.1	262.3	261.7	261.1	261.7	262.3	264.0	265.8	271.2	276.5
72.5°	217.2	217.8	218.4	218.4	218.4	219.5	220.7	222.5	224.3	227.3	230.2
75°	178.0	178.0	178.0	179.2	180.4	181.0	181.6	181.6	181.6	183.9	186.3
77.5°	135.3	138.3	141.2	140.6	140.0	141.2	142.4	144.2	146.0	147.2	148.3
80°	98.5	98.5	98.5	99.1	99.7	101.5	103.2	104.4	105.6	108.0	110.4
82.5°	62.9	63.5	64.1	65.9	67.6	68.8	70.0	71.8	73.6	73.6	73.6
85°	39.2	38.0	36.8	38.0	39.2	40.3	41.5	42.1	42.7	43.9	45.1
87.5°	19.0	19.0	19.0	19.0	19.0	19.6	20.2	20.2	20.2	20.2	20.2
90°	26.7	26.3	25.9	25.5	25.1	24.5	23.7	22.9	22.2	21.4	18.8
92.5°	38.3	38.7	39.1	39.5	39.9	39.8	39.2	38.6	38.0	37.4	36.2
95°	69.4	69.4	69.4	69.4	69.4	69.0	68.2	67.5	66.7	65.9	64.3
97.5°	99.7	99.9	100.1	100.3	100.5	100.1	99.1	98.1	97.1	96.1	94.9
100°	135.3	134.9	134.5	134.1	133.7	133.2	132.6	132.0	131.4	130.8	129.9
102.5°	171.8	172.0	172.2	172.4	172.6	172.4	171.8	171.2	170.6	170.0	168.6
105°	211.8	211.5	211.1	210.7	210.3	210.1	210.1	210.1	210.1	210.1	208.3
107.5°	252.8	253.0	253.2	253.4	253.6	253.4	252.8	252.2	251.6	251.0	250.2
110°	294.6	295.0	295.4	295.8	296.2	296.0	295.2	294.4	293.6	292.8	292.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	339.1	339.1	339.1	339.1	339.1	338.6	337.6	336.7	335.7	334.7	334.7
115°	379.2	379.4	379.6	379.8	380.0	380.0	379.8	379.6	379.4	379.2	379.6
117.5°	420.1	420.7	421.3	421.9	422.5	422.8	422.8	422.8	422.8	422.8	423.2
120°	463.7	464.1	464.5	464.9	465.3	465.6	465.8	466.0	466.2	466.4	467.4
122.5°	505.6	506.2	506.8	507.4	508.0	508.6	509.1	509.7	510.3	510.9	511.3
125°	547.4	548.2	549.0	549.8	550.6	551.4	552.2	553.0	553.7	554.5	554.9
127.5°	589.3	590.0	590.8	591.6	592.4	593.4	594.6	595.8	597.0	598.2	598.6
130°	630.2	631.6	633.0	634.4	635.7	636.8	637.6	638.4	639.2	640.0	640.6
132.5°	672.9	673.9	674.9	675.9	676.9	677.9	678.9	679.8	680.8	681.8	682.2
135°	717.4	717.8	718.2	718.6	719.0	719.6	720.4	721.2	722.0	722.8	723.0
137.5°	756.6	757.2	757.8	758.4	759.0	759.8	760.7	761.7	762.7	763.7	763.1
140°	794.9	796.3	797.6	799.0	800.4	801.2	801.4	801.6	801.8	802.0	801.8
142.5°	834.0	835.0	836.0	837.0	838.0	838.6	838.8	839.0	839.2	839.4	839.0
145°	871.4	872.2	873.0	873.8	874.6	875.1	875.3	875.5	875.7	875.9	875.3
147.5°	905.2	906.4	907.6	908.8	910.0	910.6	910.6	910.6	910.6	910.6	910.0
150°	937.3	938.5	939.7	940.8	942.0	942.6	942.6	942.6	942.6	942.6	942.2
152.5°	968.4	969.4	970.4	971.4	972.4	972.7	972.3	971.9	971.5	971.1	970.9
155°	996.0	997.4	998.8	1000.2	1001.6	1001.9	1001.1	1000.3	999.5	998.7	998.5
157.5°	1021.8	1023.0	1024.2	1025.4	1026.6	1026.8	1026.0	1025.2	1024.4	1023.6	1023.4
160°	1046.8	1047.6	1048.4	1049.1	1049.9	1049.8	1048.8	1047.9	1046.9	1045.9	1045.9
162.5°	1065.5	1066.8	1068.2	1069.6	1071.0	1071.2	1070.2	1069.2	1068.2	1067.2	1067.0
165°	1083.3	1084.7	1086.0	1087.4	1088.8	1088.9	1087.7	1086.5	1085.3	1084.2	1084.2
167.5°	1099.3	1100.5	1101.7	1102.8	1104.0	1104.0	1102.8	1101.7	1100.5	1099.3	1099.1
170°	1110.9	1112.2	1113.6	1115.0	1116.4	1116.4	1115.0	1113.6	1112.2	1110.9	1110.9
172.5°	1119.8	1121.1	1122.5	1123.9	1125.3	1125.4	1124.2	1123.0	1121.8	1120.7	1120.7
175°	1126.0	1127.4	1128.8	1130.1	1131.5	1131.6	1130.4	1129.3	1128.1	1126.9	1126.9
177.5°	1129.6	1130.9	1132.3	1133.7	1135.1	1135.2	1134.0	1132.8	1131.6	1130.4	1130.4
180°	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3
2.5°	2735.4	2728.2	2702.1	2676.0	2646.3	2616.7	2594.7	2572.8	2540.1	2507.5	2480.8
5°	2964.4	2931.2	2876.0	2820.8	2746.0	2671.3	2620.8	2570.4	2502.8	2435.1	2381.1
7.5°	3146.0	3089.0	3011.9	2934.7	2836.8	2738.9	2646.3	2553.8	2450.5	2347.3	2263.0
10°	3261.7	3223.1	3134.1	3045.1	2914.0	2782.8	2653.5	2524.1	2391.2	2258.3	2146.7
12.5°	3272.9	3276.5	3194.6	3112.7	2964.4	2816.0	2658.8	2501.6	2334.2	2166.9	2037.0
15°	3173.8	3235.0	3189.9	3144.8	2995.2	2845.7	2652.3	2458.8	2266.0	2073.2	1923.1
17.5°	2989.9	3121.0	3127.6	3134.1	2984.6	2835.0	2620.8	2406.6	2188.3	1969.9	1812.1
20°	2738.9	2932.3	2998.8	3065.3	2943.6	2822.0	2591.8	2361.5	2117.1	1872.6	1707.1
22.5°	2482.6	2717.6	2839.2	2960.8	2870.6	2780.4	2535.4	2290.3	2032.2	1774.1	1606.2
25°	2190.7	2447.0	2633.9	2820.8	2765.6	2710.4	2468.9	2227.4	1952.7	1678.0	1506.5
27.5°	1936.1	2196.6	2422.1	2647.5	2635.7	2623.8	2384.1	2144.4	1863.1	1581.9	1416.3
30°	1709.4	1952.1	2204.3	2456.5	2485.6	2514.6	2283.2	2051.8	1770.0	1488.1	1328.5
32.5°	1508.9	1720.7	1991.3	2261.9	2318.8	2375.8	2166.9	1958.1	1679.2	1400.3	1246.6
35°	1344.5	1536.8	1807.3	2077.9	2149.1	2220.3	2038.8	1857.2	1585.4	1313.7	1167.1
37.5°	1199.2	1360.0	1624.0	1888.0	1975.3	2062.5	1899.9	1737.3	1482.8	1228.2	1093.5
40°	1078.7	1208.1	1450.7	1693.4	1794.3	1895.2	1761.1	1627.0	1385.5	1144.0	1020.0
42.5°	977.8	1093.0	1313.1	1533.2	1629.9	1726.7	1613.3	1500.0	1285.2	1070.4	957.1
45°	891.8	983.8	1183.7	1383.7	1475.7	1567.6	1470.3	1373.0	1183.7	994.5	888.8
47.5°	811.1	890.0	1060.9	1231.8	1313.7	1395.6	1319.6	1243.7	1083.5	923.3	827.7
50°	738.7	802.2	951.7	1101.3	1172.5	1243.7	1176.6	1109.6	977.8	846.1	763.1
52.5°	675.8	727.4	852.6	977.8	1039.0	1100.1	1042.5	985.0	880.5	776.1	703.7
55°	613.5	657.4	766.0	874.6	916.1	957.7	913.2	868.7	784.4	700.2	639.0
57.5°	555.4	594.5	683.5	772.5	804.6	836.6	796.3	755.9	692.4	629.0	577.9
60°	498.4	530.5	604.6	678.8	698.4	718.0	685.3	652.7	608.2	563.7	518.0
62.5°	445.6	474.7	529.9	585.0	598.1	611.2	586.2	561.3	527.5	493.7	458.1
65°	391.0	413.0	458.1	503.2	511.5	519.8	497.8	475.9	450.4	424.8	398.7
67.5°	340.6	356.0	392.8	429.6	430.2	430.8	413.0	395.2	380.9	366.7	345.9
70°	291.3	306.2	330.5	354.8	355.4	356.0	341.8	327.5	316.8	306.2	290.7
72.5°	240.9	251.6	270.0	288.4	287.2	286.0	277.1	268.2	259.9	251.6	240.3
75°	195.2	204.1	216.6	229.0	225.5	221.9	217.2	212.4	205.3	198.2	191.1
77.5°	153.7	159.0	166.1	173.3	170.9	168.5	164.4	160.2	154.9	149.5	146.6
80°	112.7	115.1	119.9	124.6	123.4	122.2	117.5	112.7	111.6	110.4	106.2
82.5°	76.5	79.5	80.7	81.9	81.3	80.7	77.1	73.6	72.4	71.2	70.6
85°	45.7	46.3	46.9	47.5	45.7	43.9	42.7	41.5	41.5	41.5	40.9
87.5°	20.8	21.4	21.4	21.4	20.8	20.2	19.0	17.8	18.4	19.0	19.0
90°	16.2	13.6	11.1	8.8	6.8	4.8	2.9	0.9	2.9	4.8	6.8
92.5°	35.0	33.8	32.6	31.5	30.3	29.1	27.9	26.7	27.9	29.1	30.3
95°	62.7	61.1	59.5	58.1	56.7	55.3	53.9	52.5	53.9	55.3	56.7
97.5°	93.8	92.6	91.4	90.3	89.3	88.3	87.3	86.3	87.3	88.3	89.3
100°	128.9	127.9	126.9	125.8	124.6	123.4	122.2	121.1	122.2	123.4	124.6
102.5°	167.2	165.9	164.5	163.5	162.9	162.3	161.7	161.1	161.7	162.3	162.9
105°	206.5	204.7	202.9	201.9	201.5	201.1	200.7	200.3	200.7	201.1	201.5
107.5°	249.4	248.6	247.8	247.4	247.2	247.0	246.8	246.6	246.8	247.0	247.2
110°	292.1	291.7	291.3	290.9	290.5	290.1	289.7	289.3	289.7	290.1	290.5



TEST NUMBER: P831067

CATALOG NUMBER: S123DIP-S1000D1025U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	334.7	334.7	334.7	334.6	334.4	334.2	334.0	333.8	334.0	334.2	334.4
115°	380.0	380.4	380.8	380.7	380.1	379.5	378.9	378.3	378.9	379.5	380.1
117.5°	423.6	424.0	424.4	424.5	424.3	424.1	423.9	423.7	423.9	424.1	424.3
120°	468.4	469.4	470.4	470.3	469.1	467.9	466.7	465.5	466.7	467.9	469.1
122.5°	511.7	512.1	512.5	512.3	511.5	510.7	509.9	509.1	509.9	510.7	511.5
125°	555.3	555.7	556.1	556.0	555.4	554.8	554.2	553.7	554.2	554.8	555.4
127.5°	598.9	599.3	599.7	599.3	598.2	597.0	595.8	594.6	595.8	597.0	598.2
130°	641.2	641.8	642.4	641.9	640.3	638.7	637.1	635.5	637.1	638.7	640.3
132.5°	682.6	683.0	683.4	682.8	681.2	679.7	678.1	676.5	678.1	679.7	681.2
135°	723.2	723.4	723.6	723.1	721.9	720.7	719.5	718.3	719.5	720.7	721.9
137.5°	762.5	761.9	761.3	760.6	759.6	758.6	757.6	756.6	757.6	758.6	759.6
140°	801.6	801.4	801.2	800.6	799.6	798.6	797.6	796.7	797.6	798.6	799.6
142.5°	838.6	838.2	837.8	837.1	836.1	835.1	834.1	833.1	834.1	835.1	836.1
145°	874.7	874.1	873.5	873.0	872.6	872.2	871.8	871.4	871.8	872.2	872.6
147.5°	909.4	908.8	908.2	907.5	906.7	905.9	905.1	904.4	905.1	905.9	906.7
150°	941.8	941.4	941.0	940.7	940.3	939.9	939.5	939.1	939.5	939.9	940.3
152.5°	970.7	970.5	970.3	969.9	969.3	968.7	968.1	967.6	968.1	968.7	969.3
155°	998.3	998.1	997.9	997.8	997.8	997.8	997.8	997.8	997.8	997.8	997.8
157.5°	1023.2	1023.0	1022.8	1022.8	1023.0	1023.2	1023.4	1023.6	1023.4	1023.2	1023.0
160°	1045.9	1045.9	1045.9	1046.1	1046.5	1046.9	1047.3	1047.7	1047.3	1046.9	1046.5
162.5°	1066.8	1066.7	1066.5	1066.7	1067.2	1067.8	1068.4	1069.0	1068.4	1067.8	1067.2
165°	1084.2	1084.2	1084.2	1084.5	1085.0	1085.6	1086.2	1086.8	1086.2	1085.6	1085.0
167.5°	1098.9	1098.7	1098.5	1098.8	1099.6	1100.4	1101.2	1102.0	1101.2	1100.4	1099.6
170°	1110.9	1110.9	1110.9	1111.3	1112.0	1112.8	1113.6	1114.4	1113.6	1112.8	1112.0
172.5°	1120.7	1120.7	1120.7	1121.0	1121.8	1122.6	1123.4	1124.2	1123.4	1122.6	1121.8
175°	1126.9	1126.9	1126.9	1127.3	1128.1	1128.9	1129.7	1130.4	1129.7	1128.9	1128.1
177.5°	1130.4	1130.4	1130.4	1130.8	1131.6	1132.4	1133.2	1134.0	1133.2	1132.4	1131.6
180°	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3
2.5°	2454.1	2431.0	2407.8	2390.0	2372.2	2342.0	2311.7	2304.6	2297.5	2287.4	2277.3
5°	2327.1	2270.2	2213.2	2162.2	2111.1	2071.4	2031.6	2005.5	1979.4	1960.4	1941.4
7.5°	2178.8	2093.3	2007.9	1947.4	1886.9	1829.3	1771.7	1753.4	1735.0	1710.0	1685.1
10°	2035.2	1940.9	1846.5	1767.6	1688.7	1632.3	1575.9	1553.4	1530.8	1499.4	1468.0
12.5°	1907.0	1803.8	1700.5	1621.0	1541.5	1486.9	1432.4	1399.7	1367.1	1349.3	1331.5
15°	1772.9	1662.6	1552.2	1478.6	1405.1	1355.8	1306.6	1278.1	1249.6	1232.4	1215.2
17.5°	1654.3	1545.1	1435.9	1365.3	1294.7	1249.6	1204.5	1179.6	1154.7	1141.6	1128.6
20°	1541.5	1434.7	1327.9	1259.1	1190.3	1153.5	1116.7	1100.7	1084.6	1074.0	1063.3
22.5°	1438.3	1333.3	1228.2	1169.5	1110.8	1081.1	1051.4	1040.1	1028.9	1020.0	1011.1
25°	1335.0	1241.3	1147.5	1097.7	1047.9	1023.5	999.2	987.9	976.7	967.8	958.9
27.5°	1250.8	1161.2	1071.6	1028.9	986.2	967.2	948.2	939.3	930.4	922.1	913.8
30°	1168.9	1088.8	1008.7	971.9	935.1	917.9	900.7	891.8	882.9	875.2	867.5
32.5°	1093.0	1024.1	955.3	921.5	887.7	873.4	859.2	848.5	837.8	831.9	825.9
35°	1020.6	958.9	897.1	869.3	841.4	827.1	812.9	804.0	795.1	790.3	785.6
37.5°	958.9	903.7	848.5	821.8	795.1	781.4	767.8	760.1	752.4	750.6	748.8
40°	896.0	848.5	801.0	774.9	748.8	736.9	725.1	720.3	715.6	714.4	713.2
42.5°	843.7	797.5	751.2	727.4	703.7	693.6	683.5	681.2	678.8	680.6	682.4
45°	783.2	744.7	706.1	684.1	662.2	653.9	645.6	643.8	642.0	645.6	649.1
47.5°	732.2	696.6	661.0	640.2	619.5	613.5	607.6	607.0	606.4	611.2	615.9
50°	680.0	645.6	611.2	594.5	577.9	572.6	567.2	569.0	570.8	578.5	586.2
52.5°	631.3	599.3	567.2	551.8	536.4	532.8	529.3	533.4	537.6	545.9	554.2
55°	577.9	548.9	519.8	507.9	496.0	492.5	488.9	497.2	505.5	513.2	521.0
57.5°	526.9	501.4	475.9	465.2	454.5	453.9	453.3	461.0	468.7	477.1	485.4
60°	472.3	450.9	429.6	421.3	413.0	414.2	415.3	424.2	433.1	439.7	446.2
62.5°	422.5	404.7	386.9	379.2	371.4	374.4	377.4	386.3	395.2	402.9	410.6
65°	372.6	357.8	343.0	337.6	332.3	336.4	340.6	348.3	356.0	361.4	366.7
67.5°	325.2	312.7	300.2	296.1	291.9	296.1	300.2	307.9	315.7	321.0	326.3
70°	275.3	265.2	255.1	252.2	249.2	254.0	258.7	265.2	271.8	277.1	282.4
72.5°	229.0	221.3	213.6	213.0	212.4	216.6	220.7	227.3	233.8	237.3	240.9
75°	183.9	179.8	175.6	175.0	174.4	178.6	182.8	186.3	189.9	192.8	195.8
77.5°	143.6	140.0	136.5	137.1	137.7	140.6	143.6	147.2	150.7	152.5	154.3
80°	102.1	100.9	99.7	100.9	102.1	104.4	106.8	109.2	111.6	112.7	113.9
82.5°	70.0	68.8	67.6	69.4	71.2	73.0	74.8	76.5	78.3	78.9	79.5
85°	40.3	42.1	43.9	43.9	43.9	44.5	45.1	45.7	46.3	45.7	45.1
87.5°	19.0	19.6	20.2	20.2	20.2	20.8	21.4	21.4	21.4	20.8	20.2
90°	8.8	11.1	13.6	16.2	18.8	21.4	22.2	22.9	23.7	24.5	25.1
92.5°	31.5	32.6	33.8	35.0	36.2	37.4	38.0	38.6	39.2	39.8	39.9
95°	58.1	59.5	61.1	62.7	64.3	65.9	66.7	67.5	68.2	69.0	69.4
97.5°	90.3	91.4	92.6	93.8	94.9	96.1	97.1	98.1	99.1	100.1	100.5
100°	125.8	126.9	127.9	128.9	129.9	130.8	131.4	132.0	132.6	133.2	133.7
102.5°	163.5	164.5	165.9	167.2	168.6	170.0	170.6	171.2	171.8	172.4	172.6
105°	201.9	202.9	204.7	206.5	208.3	210.1	210.1	210.1	210.1	210.1	210.3
107.5°	247.4	247.8	248.6	249.4	250.2	251.0	251.6	252.2	252.8	253.4	253.6
110°	290.9	291.3	291.7	292.1	292.5	292.8	293.6	294.4	295.2	296.0	296.2



TEST NUMBER: P831067

CATALOG NUMBER: S123DIP-S1000D1025U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	334.6	334.7	334.7	334.7	334.7	334.7	335.7	336.7	337.6	338.6	339.1
115°	380.7	380.8	380.4	380.0	379.6	379.2	379.4	379.6	379.8	380.0	380.0
117.5°	424.5	424.4	424.0	423.6	423.2	422.8	422.8	422.8	422.8	422.8	422.5
120°	470.3	470.4	469.4	468.4	467.4	466.4	466.2	466.0	465.8	465.6	465.3
122.5°	512.3	512.5	512.1	511.7	511.3	510.9	510.3	509.7	509.1	508.6	508.0
125°	556.0	556.1	555.7	555.3	554.9	554.5	553.7	553.0	552.2	551.4	550.6
127.5°	599.3	599.7	599.3	598.9	598.6	598.2	597.0	595.8	594.6	593.4	592.4
130°	641.9	642.4	641.8	641.2	640.6	640.0	639.2	638.4	637.6	636.8	635.7
132.5°	682.8	683.4	683.0	682.6	682.2	681.8	680.8	679.8	678.9	677.9	676.9
135°	723.1	723.6	723.4	723.2	723.0	722.8	722.0	721.2	720.4	719.6	719.0
137.5°	760.6	761.3	761.9	762.5	763.1	763.7	762.7	761.7	760.7	759.8	759.0
140°	800.6	801.2	801.4	801.6	801.8	802.0	801.8	801.6	801.4	801.2	800.4
142.5°	837.1	837.8	838.2	838.6	839.0	839.4	839.2	839.0	838.8	838.6	838.0
145°	873.0	873.5	874.1	874.7	875.3	875.9	875.7	875.5	875.3	875.1	874.6
147.5°	907.5	908.2	908.8	909.4	910.0	910.6	910.6	910.6	910.6	910.6	910.0
150°	940.7	941.0	941.4	941.8	942.2	942.6	942.6	942.6	942.6	942.6	942.0
152.5°	969.9	970.3	970.5	970.7	970.9	971.1	971.5	971.9	972.3	972.7	972.4
155°	997.8	997.9	998.1	998.3	998.5	998.7	999.5	1000.3	1001.1	1001.9	1001.6
157.5°	1022.8	1022.8	1023.0	1023.2	1023.4	1023.6	1024.4	1025.2	1026.0	1026.8	1026.6
160°	1046.1	1045.9	1045.9	1045.9	1045.9	1045.9	1046.9	1047.9	1048.8	1049.8	1049.9
162.5°	1066.7	1066.5	1066.7	1066.8	1067.0	1067.2	1068.2	1069.2	1070.2	1071.2	1071.0
165°	1084.5	1084.2	1084.2	1084.2	1084.2	1084.2	1085.3	1086.5	1087.7	1088.9	1088.8
167.5°	1098.8	1098.5	1098.7	1098.9	1099.1	1099.3	1100.5	1101.7	1102.8	1104.0	1104.0
170°	1111.3	1110.9	1110.9	1110.9	1110.9	1110.9	1112.2	1113.6	1115.0	1116.4	1116.4
172.5°	1121.0	1120.7	1120.7	1120.7	1120.7	1120.7	1121.8	1123.0	1124.2	1125.4	1125.3
175°	1127.3	1126.9	1126.9	1126.9	1126.9	1126.9	1128.1	1129.3	1130.4	1131.6	1131.5
177.5°	1130.8	1130.4	1130.4	1130.4	1130.4	1130.4	1131.6	1132.8	1134.0	1135.2	1135.1
180°	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1



TEST NUMBER: P831067

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CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2557.3	2557.3	2557.3	2557.3
2.5°	2273.1	2269.0	2252.4	2235.7
5°	1927.2	1913.0	1908.2	1903.5
7.5°	1683.9	1682.7	1657.8	1632.9
10°	1469.7	1471.5	1449.0	1426.4
12.5°	1316.6	1301.8	1300.0	1298.3
15°	1201.5	1187.9	1185.5	1183.1
17.5°	1120.2	1111.9	1109.6	1107.2
20°	1058.5	1053.8	1049.6	1045.5
22.5°	1005.1	999.2	995.6	992.1
25°	953.5	948.2	947.0	945.8
27.5°	907.2	900.7	900.7	900.7
30°	863.3	859.2	857.4	855.6
32.5°	822.4	818.8	818.8	818.8
35°	783.8	782.0	779.7	777.3
37.5°	748.8	748.8	747.6	746.4
40°	715.0	716.8	716.8	716.8
42.5°	684.1	685.9	685.9	685.9
45°	652.1	655.1	656.2	657.4
47.5°	620.6	625.4	626.6	627.8
50°	589.8	593.4	593.9	594.5
52.5°	558.3	562.5	565.5	568.4
55°	525.1	529.3	531.0	532.8
57.5°	489.5	493.7	494.3	494.9
60°	450.4	454.5	455.7	456.9
62.5°	413.0	415.3	416.5	417.7
65°	370.3	373.8	376.2	378.6
67.5°	329.3	332.3	332.3	332.3
70°	283.6	284.8	286.6	288.4
72.5°	241.5	242.1	242.1	242.1
75°	197.0	198.2	198.8	199.4
77.5°	154.9	155.5	155.5	155.5
80°	113.3	112.7	112.7	112.7
82.5°	77.7	75.9	75.9	75.9
85°	44.5	43.9	44.5	45.1
87.5°	20.2	20.2	20.2	20.2
90°	25.5	25.9	26.3	26.7
92.5°	39.5	39.1	38.7	38.3
95°	69.4	69.4	69.4	69.4
97.5°	100.3	100.1	99.9	99.7
100°	134.1	134.5	134.9	135.3
102.5°	172.4	172.2	172.0	171.8
105°	210.7	211.1	211.5	211.8
107.5°	253.4	253.2	253.0	252.8
110°	295.8	295.4	295.0	294.6



TEST NUMBER: P831067

CATALOG NUMBER: S123DIP-S1000D1025U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	339.1	339.1	339.1	339.1
115°	379.8	379.6	379.4	379.2
117.5°	421.9	421.3	420.7	420.1
120°	464.9	464.5	464.1	463.7
122.5°	507.4	506.8	506.2	505.6
125°	549.8	549.0	548.2	547.4
127.5°	591.6	590.8	590.0	589.3
130°	634.4	633.0	631.6	630.2
132.5°	675.9	674.9	673.9	672.9
135°	718.6	718.2	717.8	717.4
137.5°	758.4	757.8	757.2	756.6
140°	799.0	797.6	796.3	794.9
142.5°	837.0	836.0	835.0	834.0
145°	873.8	873.0	872.2	871.4
147.5°	908.8	907.6	906.4	905.2
150°	940.8	939.7	938.5	937.3
152.5°	971.4	970.4	969.4	968.4
155°	1000.2	998.8	997.4	996.0
157.5°	1025.4	1024.2	1023.0	1021.8
160°	1049.1	1048.4	1047.6	1046.8
162.5°	1069.6	1068.2	1066.8	1065.5
165°	1087.4	1086.0	1084.7	1083.3
167.5°	1102.8	1101.7	1100.5	1099.3
170°	1115.0	1113.6	1112.2	1110.9
172.5°	1123.9	1122.5	1121.1	1119.8
175°	1130.1	1128.8	1127.4	1126.0
177.5°	1133.7	1132.3	1130.9	1129.6
180°	1133.1	1133.1	1133.1	1133.1



TEST NUMBER: P831067

CATALOG NUMBER: S123DIP-S1000D1025U940-4F0-1E-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	15.69	16.57	16.60	17.49	18.67	17.93	18.81	18.83	19.73	20.90
	3H	17.34	18.13	18.26	19.06	20.26	19.35	20.14	20.27	21.07	22.27
	4H	17.92	18.67	18.85	19.60	20.81	19.81	20.55	20.74	21.49	22.70
	6H	18.29	18.98	19.23	19.92	21.14	20.08	20.77	21.03	21.71	22.93
	8H	18.39	19.04	19.34	20.00	21.22	20.15	20.80	21.10	21.76	22.98
	12H	18.43	19.06	19.39	20.01	21.25	20.16	20.79	21.12	21.74	22.98
4H	2H	16.27	17.02	17.21	17.95	19.16	18.09	18.84	19.03	19.77	20.98
	3H	18.10	18.72	19.05	19.69	20.91	19.71	20.34	20.66	21.30	22.52
	4H	18.80	19.37	19.76	20.32	21.57	20.30	20.87	21.26	21.82	23.07
	6H	19.28	19.76	20.25	20.75	21.99	20.71	21.19	21.68	22.18	23.42
	8H	19.41	19.87	20.38	20.84	22.11	20.82	21.27	21.79	22.25	23.51
	12H	19.48	19.89	20.47	20.88	22.15	20.86	21.27	21.85	22.27	23.53
8H	4H	19.07	19.52	20.04	20.50	21.76	20.41	20.86	21.38	21.84	23.10
	6H	19.66	20.03	20.65	21.05	22.31	20.91	21.29	21.91	22.30	23.56
	8H	19.86	20.20	20.87	21.20	22.48	21.09	21.42	22.09	22.43	23.71
	12H	19.99	20.28	21.00	21.28	22.60	21.19	21.48	22.20	22.48	23.81
12H	4H	19.07	19.48	20.06	20.47	21.74	20.38	20.79	21.37	21.79	23.05
	6H	19.71	20.04	20.71	21.04	22.32	20.92	21.26	21.93	22.26	23.54
	8H	19.94	20.23	20.95	21.23	22.56	21.12	21.42	22.13	22.42	23.74