

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: P831358

Luminaire Tested: S123DIP-S340D1195U930-4F0-1E-UDD-G1

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831358  
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-S340D1195U930-4F0-1E-UDD-G1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: -

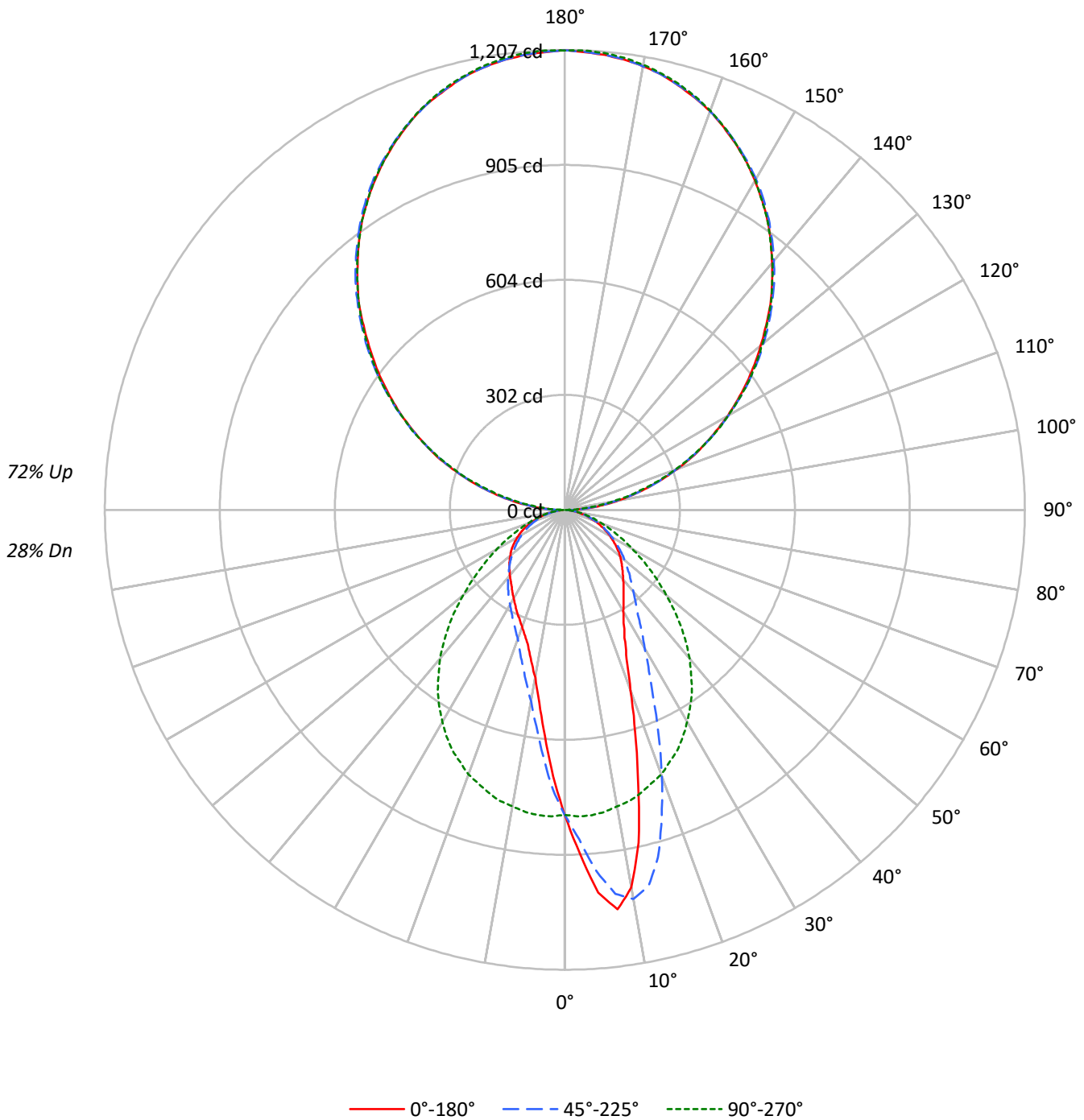
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4630.6 lumens  
Efficiency: N/A  
Efficacy: 106.7 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-Indirect  
  
Input Watts (W): 43.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

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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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28				
1	93	89	85	82	83	80	77	74	62	60	59	47	45	44	32	31	31	24				
2	85	78	72	67	76	70	65	61	55	52	49	41	39	37	29	27	26	21				
3	78	69	62	57	69	62	56	51	49	45	42	37	34	32	26	24	23	18				
4	71	61	54	48	63	55	49	44	44	39	36	33	30	28	23	21	20	16				
5	65	54	47	41	58	49	43	38	39	34	31	30	27	24	21	19	18	14				
6	60	49	41	36	54	44	38	33	35	31	27	27	24	21	19	17	16	12				
7	56	44	37	31	50	40	33	29	32	27	24	25	21	19	18	16	14	11				
8	52	40	33	28	46	36	30	26	29	25	21	23	19	17	16	14	13	10				
9	48	37	30	25	43	33	27	23	27	22	19	21	18	15	15	13	12	9				
10	45	34	27	22	40	31	25	21	25	20	17	19	16	14	14	12	11	9				

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

	0°	45°	90°	135°	180°
0°	8617	8617	8617	8617	8617
5°	10897	10284	8694	7006	6438
10°	11002	11335	8636	5584	4880
15°	8286	10524	8576	4729	4126
20°	5774	8517	8467	4136	3748
25°	4403	6549	8280	3805	3515
30°	3808	5203	7982	3571	3329
35°	3533	4393	7638	3402	3197
40°	3346	3940	7156	3242	3153
45°	3235	3647	6543	3116	3133
50°	3178	3414	5816	3001	3116
55°	3061	3245	5103	2894	3130
60°	2951	3063	4398	2790	3078
65°	2771	2891	3795	2682	3018
70°	2559	2672	3226	2502	2842
75°	2316	2396	2766	2325	2595
80°	1909	2095	2188	2027	2188
85°	1519	1692	1606	1717	1741

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 7470 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.7	1.6
10°-20°	188.3	4.1
20°-30°	222.9	4.8
30°-40°	224.1	4.8
40°-50°	205.6	4.4
50°-60°	169.7	3.7
60°-70°	120.1	2.6
70°-80°	64.1	1.4
80°-90°	18.8	0.4
90°-100°	77.6	1.7
100°-110°	235.0	5.1
110°-120°	400.0	8.6
120°-130°	526.2	11.4
130°-140°	591.5	12.8
140°-150°	581.5	12.6
150°-160°	489.5	10.6
160°-170°	325.9	7.0
170°-180°	114.1	2.5
0°-30°	486.9	10.5
0°-40°	711.0	15.4
0°-60°	1086.4	23.5
0°-90°	1289.3	27.8
90°-120°	712.6	15.4
90°-150°	2411.7	52.1
90°-180°	3341.0	72.2
0°-180°	4630.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	800	800	800	800	800	
5°	1008	952	805	648	596	96
15°	744	944	770	424	370	205
25°	371	551	697	320	296	175
35°	269	334	581	259	243	169
45°	212	240	430	205	206	165
55°	163	173	272	154	167	146
65°	109	114	149	105	118	108
75°	56	58	66	56	62	59
85°	12	14	13	14	14	14
90°	28	23	1	23	28	14
95°	74	70	56	70	74	74
105°	226	224	213	224	226	239
115°	404	404	403	404	404	400
125°	583	590	589	590	583	521
135°	764	769	764	769	764	587
145°	927	932	927	932	927	579
155°	1060	1063	1062	1063	1060	488
165°	1153	1154	1157	1154	1153	325
175°	1198	1199	1203	1199	1198	114
180°	1206	1206	1206	1206	1206	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5
2.5°	902.3	901.3	900.4	895.8	891.1	888.9	886.7	880.0	873.3	865.9	858.4
5°	1008.5	1011.1	1013.7	1010.7	1007.8	998.7	989.5	977.5	965.4	951.8	938.3
7.5°	1057.5	1059.0	1060.5	1058.6	1056.8	1054.4	1052.0	1041.2	1030.4	1016.5	1002.6
10°	1006.6	1010.0	1013.3	1020.6	1027.8	1036.0	1044.2	1042.7	1041.2	1037.1	1033.0
12.5°	894.8	898.9	903.0	917.5	932.0	950.5	969.1	985.1	1001.1	1012.2	1023.4
15°	743.6	755.0	766.3	779.5	792.7	820.0	847.3	880.9	914.5	944.4	974.3
17.5°	612.5	616.8	621.1	635.2	649.3	683.7	718.0	756.8	795.7	845.2	894.8
20°	504.1	508.0	511.9	530.4	549.0	575.9	602.9	646.5	690.2	743.5	796.8
22.5°	423.5	429.6	435.7	446.1	456.5	482.3	508.1	547.0	585.8	644.7	703.5
25°	370.7	375.2	379.6	385.9	392.3	412.9	433.5	465.4	497.4	551.4	605.5
27.5°	334.7	336.5	338.4	344.7	351.0	364.4	377.8	405.3	432.7	478.6	524.5
30°	306.4	307.7	309.0	314.6	320.2	329.3	338.4	358.3	378.1	418.6	459.1
32.5°	286.8	287.7	288.6	292.9	297.2	303.7	310.2	324.6	339.1	372.6	406.0
35°	268.9	269.5	270.0	273.2	276.4	281.2	286.0	297.0	307.9	334.3	360.7
37.5°	253.3	254.1	254.8	256.7	258.5	262.8	267.1	275.8	284.5	304.8	325.0
40°	238.1	239.4	240.7	242.0	243.3	246.8	250.4	257.0	263.7	280.4	297.2
42.5°	225.1	226.4	227.7	228.3	228.8	230.9	232.9	239.0	245.2	257.6	270.0
45°	212.5	213.0	213.6	214.1	214.7	216.4	218.0	223.4	228.8	239.6	250.4
47.5°	201.0	201.0	201.0	201.3	201.7	203.2	204.7	208.6	212.5	220.8	229.2
50°	189.8	189.8	189.8	189.3	188.7	189.6	190.6	193.5	196.5	203.9	211.4
52.5°	176.4	176.4	176.4	176.6	176.8	176.8	176.8	179.4	182.0	188.7	195.4
55°	163.1	163.8	164.6	164.0	163.4	163.8	164.2	165.9	167.5	172.9	178.3
57.5°	149.7	150.1	150.4	150.3	150.1	150.3	150.4	151.9	153.4	157.5	161.6
60°	137.1	137.1	137.1	136.7	136.3	136.7	137.1	137.8	138.6	142.3	146.0
62.5°	123.0	123.1	123.3	123.5	123.7	123.3	123.0	123.9	124.8	127.6	130.4
65°	108.8	109.0	109.2	109.8	110.3	109.9	109.6	110.5	111.4	113.5	115.5
67.5°	96.2	95.8	95.5	95.6	95.8	96.4	96.9	97.1	97.3	99.5	101.8
70°	81.3	81.7	82.1	81.9	81.7	81.9	82.1	82.6	83.2	84.9	86.5
72.5°	68.0	68.2	68.3	68.3	68.3	68.7	69.1	69.6	70.2	71.1	72.1
75°	55.7	55.7	55.7	56.1	56.5	56.6	56.8	56.8	56.8	57.6	58.3
77.5°	42.3	43.3	44.2	44.0	43.8	44.2	44.6	45.1	45.7	46.1	46.4
80°	30.8	30.8	30.8	31.0	31.2	31.8	32.3	32.7	33.1	33.8	34.5
82.5°	19.7	19.9	20.1	20.6	21.2	21.5	21.9	22.5	23.0	23.0	23.0
85°	12.3	11.9	11.5	11.9	12.3	12.6	13.0	13.2	13.4	13.7	14.1
87.5°	5.9	5.9	5.9	5.9	5.9	6.1	6.3	6.3	6.3	6.3	6.3
90°	28.4	28.0	27.6	27.2	26.7	26.1	25.3	24.4	23.6	22.7	20.0
92.5°	40.7	41.2	41.6	42.0	42.4	42.3	41.7	41.0	40.4	39.8	38.5
95°	73.9	73.9	73.9	73.9	73.9	73.5	72.6	71.8	70.9	70.1	68.4
97.5°	106.1	106.3	106.5	106.7	106.9	106.5	105.5	104.4	103.4	102.3	101.0
100°	144.0	143.6	143.1	142.7	142.3	141.8	141.1	140.5	139.9	139.3	138.2
102.5°	182.8	183.0	183.2	183.5	183.7	183.5	182.8	182.2	181.6	180.9	179.5
105°	225.5	225.0	224.6	224.2	223.8	223.6	223.6	223.6	223.6	223.6	221.7
107.5°	269.0	269.2	269.4	269.7	269.9	269.7	269.0	268.4	267.8	267.1	266.3
110°	313.5	314.0	314.4	314.8	315.2	315.0	314.2	313.3	312.5	311.7	311.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	360.9	360.9	360.9	360.9	360.9	360.4	359.3	358.3	357.2	356.2	356.2
115°	403.5	403.8	404.0	404.2	404.4	404.4	404.2	404.0	403.8	403.5	404.0
117.5°	447.1	447.7	448.4	449.0	449.6	450.0	450.0	450.0	450.0	450.0	450.4
120°	493.5	494.0	494.4	494.8	495.2	495.5	495.7	496.0	496.2	496.4	497.4
122.5°	538.1	538.7	539.3	539.9	540.6	541.2	541.8	542.5	543.1	543.7	544.2
125°	582.6	583.4	584.3	585.1	585.9	586.8	587.6	588.5	589.3	590.2	590.6
127.5°	627.1	627.9	628.8	629.6	630.5	631.5	632.8	634.0	635.3	636.6	637.0
130°	670.7	672.1	673.6	675.1	676.6	677.7	678.6	679.4	680.3	681.1	681.7
132.5°	716.1	717.2	718.2	719.3	720.4	721.4	722.5	723.5	724.6	725.6	726.0
135°	763.5	763.9	764.3	764.8	765.2	765.8	766.7	767.5	768.3	769.2	769.4
137.5°	805.2	805.8	806.5	807.1	807.7	808.6	809.6	810.7	811.7	812.8	812.1
140°	845.9	847.4	848.9	850.3	851.8	852.7	852.9	853.1	853.3	853.5	853.3
142.5°	887.6	888.7	889.7	890.8	891.8	892.4	892.7	892.9	893.1	893.3	892.9
145°	927.4	928.2	929.1	929.9	930.8	931.3	931.5	931.7	931.9	932.1	931.5
147.5°	963.4	964.6	965.9	967.2	968.4	969.1	969.1	969.1	969.1	969.1	968.4
150°	997.5	998.7	1000.0	1001.3	1002.5	1003.2	1003.2	1003.2	1003.2	1003.2	1002.7
152.5°	1030.6	1031.7	1032.7	1033.8	1034.9	1035.2	1034.7	1034.3	1033.9	1033.5	1033.3
155°	1060.0	1061.5	1063.0	1064.4	1065.9	1066.2	1065.4	1064.5	1063.7	1062.8	1062.6
157.5°	1087.5	1088.7	1090.0	1091.3	1092.5	1092.7	1091.9	1091.1	1090.2	1089.4	1089.2
160°	1114.0	1114.8	1115.7	1116.5	1117.4	1117.3	1116.2	1115.2	1114.1	1113.1	1113.1
162.5°	1133.9	1135.4	1136.8	1138.3	1139.8	1140.0	1138.9	1137.9	1136.8	1135.8	1135.6
165°	1152.8	1154.3	1155.8	1157.3	1158.7	1158.8	1157.6	1156.3	1155.1	1153.8	1153.8
167.5°	1169.9	1171.2	1172.4	1173.7	1174.9	1174.9	1173.7	1172.4	1171.2	1169.9	1169.7
170°	1182.2	1183.7	1185.2	1186.6	1188.1	1188.1	1186.6	1185.2	1183.7	1182.2	1182.2
172.5°	1191.7	1193.2	1194.6	1196.1	1197.6	1197.7	1196.4	1195.2	1193.9	1192.6	1192.6
175°	1198.3	1199.8	1201.3	1202.7	1204.2	1204.3	1203.0	1201.8	1200.5	1199.3	1199.3
177.5°	1202.1	1203.6	1205.0	1206.5	1208.0	1208.1	1206.8	1205.6	1204.3	1203.0	1203.0
180°	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5
2.5°	856.2	854.0	845.8	837.6	828.3	819.1	812.2	805.3	795.1	784.9	776.5
5°	927.9	917.5	900.2	882.9	859.5	836.1	820.4	804.6	783.4	762.2	745.3
7.5°	984.7	966.9	942.7	918.6	888.0	857.3	828.3	799.4	767.0	734.7	708.4
10°	1020.9	1008.9	981.0	953.1	912.1	871.1	830.6	790.1	748.5	706.9	672.0
12.5°	1024.5	1025.6	1000.0	974.3	927.9	881.5	832.2	783.0	730.6	678.3	637.6
15°	993.4	1012.6	998.5	984.3	937.5	890.7	830.2	769.6	709.3	648.9	601.9
17.5°	935.9	976.9	979.0	981.0	934.2	887.4	820.4	753.3	685.0	616.6	567.2
20°	857.3	917.9	938.7	959.5	921.4	883.3	811.3	739.2	662.7	586.2	534.3
22.5°	777.1	850.6	888.7	926.8	898.5	870.3	793.6	716.9	636.1	555.3	502.8
25°	685.7	765.9	824.4	882.9	865.7	848.4	772.8	697.2	611.2	525.2	471.6
27.5°	606.0	687.6	758.1	828.7	825.0	821.3	746.2	671.2	583.2	495.1	443.3
30°	535.1	611.0	690.0	768.9	778.0	787.1	714.7	642.2	554.0	465.8	415.8
32.5°	472.3	538.6	623.3	708.0	725.8	743.6	678.3	612.9	525.6	438.3	390.2
35°	420.9	481.0	565.7	650.4	672.7	695.0	638.2	581.3	496.3	411.2	365.3
37.5°	375.4	425.7	508.3	591.0	618.3	645.6	594.7	543.8	464.1	384.5	342.3
40°	337.7	378.1	454.1	530.1	561.6	593.2	551.2	509.3	433.7	358.1	319.3
42.5°	306.1	342.1	411.0	479.9	510.2	540.5	505.0	469.5	402.3	335.1	299.6
45°	279.1	307.9	370.5	433.1	461.9	490.7	460.2	429.8	370.5	311.3	278.2
47.5°	253.9	278.6	332.1	385.6	411.2	436.8	413.1	389.3	339.1	289.0	259.1
50°	231.2	251.1	297.9	344.7	367.0	389.3	368.3	347.3	306.1	264.8	238.8
52.5°	211.5	227.7	266.9	306.1	325.2	344.3	326.3	308.3	275.6	242.9	220.3
55°	192.0	205.8	239.8	273.8	286.8	299.8	285.8	271.9	245.5	219.2	200.0
57.5°	173.8	186.1	214.0	241.8	251.8	261.9	249.2	236.6	216.7	196.9	180.9
60°	156.0	166.0	189.3	212.5	218.6	224.7	214.5	204.3	190.4	176.4	162.1
62.5°	139.5	148.6	165.9	183.1	187.2	191.3	183.5	175.7	165.1	154.5	143.4
65°	122.4	129.3	143.4	157.5	160.1	162.7	155.8	149.0	141.0	133.0	124.8
67.5°	106.6	111.4	123.0	134.5	134.7	134.8	129.3	123.7	119.2	114.8	108.3
70°	91.2	95.8	103.4	111.1	111.3	111.4	107.0	102.5	99.2	95.8	91.0
72.5°	75.4	78.7	84.5	90.3	89.9	89.5	86.7	83.9	81.3	78.7	75.2
75°	61.1	63.9	67.8	71.7	70.6	69.5	68.0	66.5	64.3	62.0	59.8
77.5°	48.1	49.8	52.0	54.2	53.5	52.7	51.4	50.1	48.5	46.8	45.9
80°	35.3	36.0	37.5	39.0	38.6	38.3	36.8	35.3	34.9	34.5	33.2
82.5°	24.0	24.9	25.3	25.6	25.4	25.3	24.1	23.0	22.7	22.3	22.1
85°	14.3	14.5	14.7	14.9	14.3	13.7	13.4	13.0	13.0	13.0	12.8
87.5°	6.5	6.7	6.7	6.7	6.5	6.3	5.9	5.6	5.8	5.9	5.9
90°	17.3	14.5	11.8	9.4	7.3	5.2	3.1	0.9	3.1	5.2	7.3
92.5°	37.3	36.0	34.7	33.5	32.2	30.9	29.7	28.4	29.7	30.9	32.2
95°	66.7	65.0	63.4	61.8	60.3	58.8	57.4	55.9	57.4	58.8	60.3
97.5°	99.8	98.5	97.3	96.1	95.0	94.0	92.9	91.9	92.9	94.0	95.0
100°	137.1	136.1	135.0	133.9	132.6	131.4	130.1	128.8	130.1	131.4	132.6
102.5°	178.0	176.5	175.0	174.0	173.4	172.7	172.1	171.5	172.1	172.7	173.4
105°	219.8	217.9	216.0	214.8	214.4	214.0	213.6	213.1	213.6	214.0	214.4
107.5°	265.4	264.6	263.8	263.2	263.0	262.8	262.6	262.4	262.6	262.8	263.0
110°	310.8	310.4	310.0	309.6	309.1	308.7	308.3	307.9	308.3	308.7	309.1





TEST NUMBER: P831358

CATALOG NUMBER: S123DIP-S340D1195U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	356.2	356.2	356.2	356.1	355.9	355.7	355.4	355.2	355.4	355.7	355.9
115°	404.4	404.8	405.2	405.1	404.5	403.9	403.2	402.6	403.2	403.9	404.5
117.5°	450.8	451.2	451.6	451.7	451.5	451.3	451.1	450.9	451.1	451.3	451.5
120°	498.5	499.5	500.6	500.5	499.2	498.0	496.7	495.4	496.7	498.0	499.2
122.5°	544.6	545.0	545.4	545.2	544.4	543.5	542.7	541.8	542.7	543.5	544.4
125°	591.0	591.4	591.8	591.7	591.1	590.5	589.8	589.2	589.8	590.5	591.1
127.5°	637.4	637.8	638.3	637.8	636.6	635.3	634.0	632.8	634.0	635.3	636.6
130°	682.4	683.0	683.6	683.1	681.4	679.7	678.0	676.4	678.0	679.7	681.4
132.5°	726.5	726.9	727.3	726.7	725.0	723.3	721.6	719.9	721.6	723.3	725.0
135°	769.6	769.8	770.0	769.5	768.2	767.0	765.7	764.5	765.7	767.0	768.2
137.5°	811.5	810.9	810.2	809.4	808.3	807.3	806.2	805.2	806.2	807.3	808.3
140°	853.1	852.9	852.7	852.0	851.0	849.9	848.9	847.8	848.9	849.9	851.0
142.5°	892.4	892.0	891.6	890.9	889.8	888.8	887.7	886.7	887.7	888.8	889.8
145°	930.9	930.2	929.6	929.1	928.7	928.2	927.8	927.4	927.8	928.2	928.7
147.5°	967.8	967.2	966.5	965.8	965.0	964.1	963.3	962.4	963.3	964.1	965.0
150°	1002.3	1001.9	1001.5	1001.1	1000.6	1000.2	999.8	999.4	999.8	1000.2	1000.6
152.5°	1033.1	1032.9	1032.6	1032.2	1031.6	1031.0	1030.3	1029.7	1030.3	1031.0	1031.6
155°	1062.4	1062.2	1062.0	1061.9	1061.9	1061.9	1061.9	1061.9	1061.9	1061.9	1061.9
157.5°	1089.0	1088.7	1088.5	1088.5	1088.7	1089.0	1089.2	1089.4	1089.2	1089.0	1088.7
160°	1113.1	1113.1	1113.1	1113.3	1113.7	1114.1	1114.5	1114.9	1114.5	1114.1	1113.7
162.5°	1135.4	1135.2	1134.9	1135.2	1135.8	1136.4	1137.1	1137.7	1137.1	1136.4	1135.8
165°	1153.8	1153.8	1153.8	1154.1	1154.7	1155.4	1156.0	1156.6	1156.0	1155.4	1154.7
167.5°	1169.5	1169.3	1169.0	1169.4	1170.2	1171.0	1171.9	1172.7	1171.9	1171.0	1170.2
170°	1182.2	1182.2	1182.2	1182.6	1183.5	1184.3	1185.2	1186.0	1185.2	1184.3	1183.5
172.5°	1192.6	1192.6	1192.6	1193.0	1193.9	1194.7	1195.6	1196.4	1195.6	1194.7	1193.9
175°	1199.3	1199.3	1199.3	1199.7	1200.5	1201.4	1202.2	1203.0	1202.2	1201.4	1200.5
177.5°	1203.0	1203.0	1203.0	1203.5	1204.3	1205.2	1206.0	1206.8	1206.0	1205.2	1204.3
180°	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9



TEST NUMBER: P831358

CATALOG NUMBER: S123DIP-S340D1195U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5
2.5°	768.2	760.9	753.7	748.1	742.5	733.1	723.6	721.4	719.1	716.0	712.8
5°	728.4	710.6	692.8	676.8	660.8	648.4	635.9	627.8	619.6	613.6	607.7
7.5°	682.0	655.2	628.5	609.6	590.6	572.6	554.6	548.8	543.1	535.3	527.5
10°	637.0	607.5	578.0	553.3	528.6	510.9	493.3	486.2	479.2	469.3	459.5
12.5°	596.9	564.6	532.3	507.4	482.5	465.4	448.3	438.1	427.9	422.3	416.8
15°	555.0	520.4	485.9	462.8	439.8	424.4	409.0	400.1	391.1	385.8	380.4
17.5°	517.8	483.6	449.5	427.4	405.3	391.1	377.0	369.2	361.4	357.3	353.3
20°	482.5	449.1	415.7	394.1	372.6	361.1	349.5	344.5	339.5	336.2	332.8
22.5°	450.2	417.3	384.5	366.1	347.7	338.4	329.1	325.6	322.0	319.3	316.5
25°	417.9	388.5	359.2	343.6	328.0	320.4	312.8	309.2	305.7	302.9	300.1
27.5°	391.5	363.5	335.4	322.0	308.7	302.7	296.8	294.0	291.2	288.6	286.0
30°	365.9	340.8	315.7	304.2	292.7	287.3	281.9	279.1	276.4	273.9	271.5
32.5°	342.1	320.6	299.0	288.4	277.8	273.4	268.9	265.6	262.2	260.4	258.5
35°	319.4	300.1	280.8	272.1	263.4	258.9	254.4	251.7	248.9	247.4	245.9
37.5°	300.1	282.9	265.6	257.2	248.9	244.6	240.3	237.9	235.5	234.9	234.4
40°	280.4	265.6	250.7	242.6	234.4	230.7	227.0	225.5	224.0	223.6	223.2
42.5°	264.1	249.6	235.1	227.7	220.3	217.1	214.0	213.2	212.5	213.0	213.6
45°	245.2	233.1	221.0	214.1	207.3	204.7	202.1	201.5	201.0	202.1	203.2
47.5°	229.2	218.0	206.9	200.4	193.9	192.0	190.2	190.0	189.8	191.3	192.8
50°	212.8	202.1	191.3	186.1	180.9	179.2	177.6	178.1	178.7	181.1	183.5
52.5°	197.6	187.6	177.6	172.7	167.9	166.8	165.7	167.0	168.3	170.9	173.5
55°	180.9	171.8	162.7	159.0	155.3	154.2	153.0	155.6	158.2	160.7	163.1
57.5°	164.9	156.9	149.0	145.6	142.3	142.1	141.9	144.3	146.7	149.3	151.9
60°	147.8	141.2	134.5	131.9	129.3	129.6	130.0	132.8	135.6	137.6	139.7
62.5°	132.2	126.7	121.1	118.7	116.3	117.2	118.1	120.9	123.7	126.1	128.5
65°	116.6	112.0	107.3	105.7	104.0	105.3	106.6	109.0	111.4	113.1	114.8
67.5°	101.8	97.9	94.0	92.7	91.4	92.7	94.0	96.4	98.8	100.5	102.1
70°	86.2	83.0	79.9	78.9	78.0	79.5	81.0	83.0	85.1	86.7	88.4
72.5°	71.7	69.3	66.9	66.7	66.5	67.8	69.1	71.1	73.2	74.3	75.4
75°	57.6	56.3	55.0	54.8	54.6	55.9	57.2	58.3	59.4	60.4	61.3
77.5°	44.9	43.8	42.7	42.9	43.1	44.0	44.9	46.1	47.2	47.7	48.3
80°	31.9	31.6	31.2	31.6	31.9	32.7	33.4	34.2	34.9	35.3	35.7
82.5°	21.9	21.5	21.2	21.7	22.3	22.8	23.4	24.0	24.5	24.7	24.9
85°	12.6	13.2	13.7	13.7	13.7	13.9	14.1	14.3	14.5	14.3	14.1
87.5°	5.9	6.1	6.3	6.3	6.3	6.5	6.7	6.7	6.7	6.5	6.3
90°	9.4	11.8	14.5	17.3	20.0	22.7	23.6	24.4	25.3	26.1	26.7
92.5°	33.5	34.7	36.0	37.3	38.5	39.8	40.4	41.0	41.7	42.3	42.4
95°	61.8	63.4	65.0	66.7	68.4	70.1	70.9	71.8	72.6	73.5	73.9
97.5°	96.1	97.3	98.5	99.8	101.0	102.3	103.4	104.4	105.5	106.5	106.9
100°	133.9	135.0	136.1	137.1	138.2	139.3	139.9	140.5	141.1	141.8	142.3
102.5°	174.0	175.0	176.5	178.0	179.5	180.9	181.6	182.2	182.8	183.5	183.7
105°	214.8	216.0	217.9	219.8	221.7	223.6	223.6	223.6	223.6	223.6	223.8
107.5°	263.2	263.8	264.6	265.4	266.3	267.1	267.8	268.4	269.0	269.7	269.9
110°	309.6	310.0	310.4	310.8	311.2	311.7	312.5	313.3	314.2	315.0	315.2



TEST NUMBER: P831358

CATALOG NUMBER: S123DIP-S340D1195U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	356.1	356.2	356.2	356.2	356.2	356.2	357.2	358.3	359.3	360.4	360.9
115°	405.1	405.2	404.8	404.4	404.0	403.5	403.8	404.0	404.2	404.4	404.4
117.5°	451.7	451.6	451.2	450.8	450.4	450.0	450.0	450.0	450.0	450.0	449.6
120°	500.5	500.6	499.5	498.5	497.4	496.4	496.2	496.0	495.7	495.5	495.2
122.5°	545.2	545.4	545.0	544.6	544.2	543.7	543.1	542.5	541.8	541.2	540.6
125°	591.7	591.8	591.4	591.0	590.6	590.2	589.3	588.5	587.6	586.8	585.9
127.5°	637.8	638.3	637.8	637.4	637.0	636.6	635.3	634.0	632.8	631.5	630.5
130°	683.1	683.6	683.0	682.4	681.7	681.1	680.3	679.4	678.6	677.7	676.6
132.5°	726.7	727.3	726.9	726.5	726.0	725.6	724.6	723.5	722.5	721.4	720.4
135°	769.5	770.0	769.8	769.6	769.4	769.2	768.3	767.5	766.7	765.8	765.2
137.5°	809.4	810.2	810.9	811.5	812.1	812.8	811.7	810.7	809.6	808.6	807.7
140°	852.0	852.7	852.9	853.1	853.3	853.5	853.3	853.1	852.9	852.7	851.8
142.5°	890.9	891.6	892.0	892.4	892.9	893.3	893.1	892.9	892.7	892.4	891.8
145°	929.1	929.6	930.2	930.9	931.5	932.1	931.9	931.7	931.5	931.3	930.8
147.5°	965.8	966.5	967.2	967.8	968.4	969.1	969.1	969.1	969.1	969.1	968.4
150°	1001.1	1001.5	1001.9	1002.3	1002.7	1003.2	1003.2	1003.2	1003.2	1003.2	1002.5
152.5°	1032.2	1032.6	1032.9	1033.1	1033.3	1033.5	1033.9	1034.3	1034.7	1035.2	1034.9
155°	1061.9	1062.0	1062.2	1062.4	1062.6	1062.8	1063.7	1064.5	1065.4	1066.2	1065.9
157.5°	1088.5	1088.5	1088.7	1089.0	1089.2	1089.4	1090.2	1091.1	1091.9	1092.7	1092.5
160°	1113.3	1113.1	1113.1	1113.1	1113.1	1113.1	1114.1	1115.2	1116.2	1117.3	1117.4
162.5°	1135.2	1134.9	1135.2	1135.4	1135.6	1135.8	1136.8	1137.9	1138.9	1140.0	1139.8
165°	1154.1	1153.8	1153.8	1153.8	1153.8	1153.8	1155.1	1156.3	1157.6	1158.8	1158.7
167.5°	1169.4	1169.0	1169.3	1169.5	1169.7	1169.9	1171.2	1172.4	1173.7	1174.9	1174.9
170°	1182.6	1182.2	1182.2	1182.2	1182.2	1182.2	1183.7	1185.2	1186.6	1188.1	1188.1
172.5°	1193.0	1192.6	1192.6	1192.6	1192.6	1192.6	1193.9	1195.2	1196.4	1197.7	1197.6
175°	1199.7	1199.3	1199.3	1199.3	1199.3	1199.3	1200.5	1201.8	1203.0	1204.3	1204.2
177.5°	1203.5	1203.0	1203.0	1203.0	1203.0	1203.0	1204.3	1205.6	1206.8	1208.1	1208.0
180°	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9



TEST NUMBER: P831358

CATALOG NUMBER: S123DIP-S340D1195U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	800.5	800.5	800.5	800.5
2.5°	711.5	710.2	705.0	699.8
5°	603.2	598.8	597.3	595.8
7.5°	527.1	526.7	518.9	511.1
10°	460.0	460.6	453.5	446.5
12.5°	412.1	407.5	406.9	406.4
15°	376.1	371.8	371.1	370.3
17.5°	350.7	348.1	347.3	346.6
20°	331.3	329.8	328.5	327.2
22.5°	314.6	312.8	311.6	310.5
25°	298.5	296.8	296.4	296.0
27.5°	284.0	281.9	281.9	281.9
30°	270.2	268.9	268.4	267.8
32.5°	257.4	256.3	256.3	256.3
35°	245.3	244.8	244.0	243.3
37.5°	234.4	234.4	234.0	233.6
40°	223.8	224.4	224.4	224.4
42.5°	214.1	214.7	214.7	214.7
45°	204.1	205.0	205.4	205.8
47.5°	194.3	195.8	196.1	196.5
50°	184.6	185.7	185.9	186.1
52.5°	174.8	176.1	177.0	177.9
55°	164.4	165.7	166.2	166.8
57.5°	153.2	154.5	154.7	154.9
60°	141.0	142.3	142.6	143.0
62.5°	129.3	130.0	130.4	130.8
65°	115.9	117.0	117.8	118.5
67.5°	103.1	104.0	104.0	104.0
70°	88.8	89.1	89.7	90.3
72.5°	75.6	75.8	75.8	75.8
75°	61.7	62.0	62.2	62.4
77.5°	48.5	48.7	48.7	48.7
80°	35.5	35.3	35.3	35.3
82.5°	24.3	23.8	23.8	23.8
85°	13.9	13.7	13.9	14.1
87.5°	6.3	6.3	6.3	6.3
90°	27.2	27.6	28.0	28.4
92.5°	42.0	41.6	41.2	40.7
95°	73.9	73.9	73.9	73.9
97.5°	106.7	106.5	106.3	106.1
100°	142.7	143.1	143.6	144.0
102.5°	183.5	183.2	183.0	182.8
105°	224.2	224.6	225.0	225.5
107.5°	269.7	269.4	269.2	269.0
110°	314.8	314.4	314.0	313.5



TEST NUMBER: P831358

CATALOG NUMBER: S123DIP-S340D1195U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	360.9	360.9	360.9	360.9
115°	404.2	404.0	403.8	403.5
117.5°	449.0	448.4	447.7	447.1
120°	494.8	494.4	494.0	493.5
122.5°	539.9	539.3	538.7	538.1
125°	585.1	584.3	583.4	582.6
127.5°	629.6	628.8	627.9	627.1
130°	675.1	673.6	672.1	670.7
132.5°	719.3	718.2	717.2	716.1
135°	764.8	764.3	763.9	763.5
137.5°	807.1	806.5	805.8	805.2
140°	850.3	848.9	847.4	845.9
142.5°	890.8	889.7	888.7	887.6
145°	929.9	929.1	928.2	927.4
147.5°	967.2	965.9	964.6	963.4
150°	1001.3	1000.0	998.7	997.5
152.5°	1033.8	1032.7	1031.7	1030.6
155°	1064.4	1063.0	1061.5	1060.0
157.5°	1091.3	1090.0	1088.7	1087.5
160°	1116.5	1115.7	1114.8	1114.0
162.5°	1138.3	1136.8	1135.4	1133.9
165°	1157.3	1155.8	1154.3	1152.8
167.5°	1173.7	1172.4	1171.2	1169.9
170°	1186.6	1185.2	1183.7	1182.2
172.5°	1196.1	1194.6	1193.2	1191.7
175°	1202.7	1201.3	1199.8	1198.3
177.5°	1206.5	1205.0	1203.6	1202.1
180°	1205.9	1205.9	1205.9	1205.9



TEST NUMBER: P831358

CATALOG NUMBER: S123DIP-S340D1195U930-4F0-1E-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	8.51	9.18	9.64	10.30	11.86	10.74	11.42	11.88	12.54	14.10
	3H	10.14	10.75	11.28	11.87	13.45	12.16	12.76	13.30	13.89	15.46
	4H	10.71	11.28	11.86	12.41	13.99	12.60	13.17	13.75	14.30	15.88
	6H	11.07	11.60	12.23	12.73	14.32	12.86	13.39	14.02	14.52	16.11
	8H	11.16	11.66	12.32	12.81	14.39	12.92	13.42	14.08	14.57	16.15
	12H	11.20	11.68	12.37	12.82	14.42	12.94	13.41	14.10	14.55	16.16
4H	2H	9.06	9.64	10.22	10.76	12.34	10.89	11.46	12.04	12.59	14.17
	3H	10.87	11.35	12.04	12.51	14.10	12.49	12.97	13.65	14.12	15.71
	4H	11.57	12.00	12.73	13.15	14.76	13.07	13.51	14.23	14.65	16.26
	6H	12.03	12.41	13.20	13.57	15.17	13.46	13.84	14.63	15.00	16.60
	8H	12.16	12.51	13.33	13.67	15.29	13.57	13.92	14.74	15.08	16.69
	12H	12.22	12.54	13.41	13.71	15.33	13.60	13.92	14.79	15.09	16.71
8H	4H	11.82	12.17	12.98	13.33	14.94	13.16	13.51	14.33	14.67	16.28
	6H	12.40	12.69	13.59	13.89	15.50	13.65	13.94	14.84	15.14	16.76
	8H	12.61	12.86	13.80	14.03	15.67	13.83	14.08	15.02	15.26	16.90
	12H	12.72	12.94	13.92	14.12	15.79	13.93	14.15	15.12	15.32	16.99
12H	4H	11.81	12.13	12.99	13.30	14.92	13.12	13.44	14.31	14.61	16.23
	6H	12.45	12.70	13.64	13.88	15.51	13.67	13.92	14.86	15.10	16.73
	8H	12.67	12.90	13.87	14.07	15.74	13.86	14.08	15.05	15.25	16.92