

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: P831422

Luminaire Tested: S123DIP-S340D585U950-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831422
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-S340D585U950-4F0-1E-UDD-G4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: -

Summary

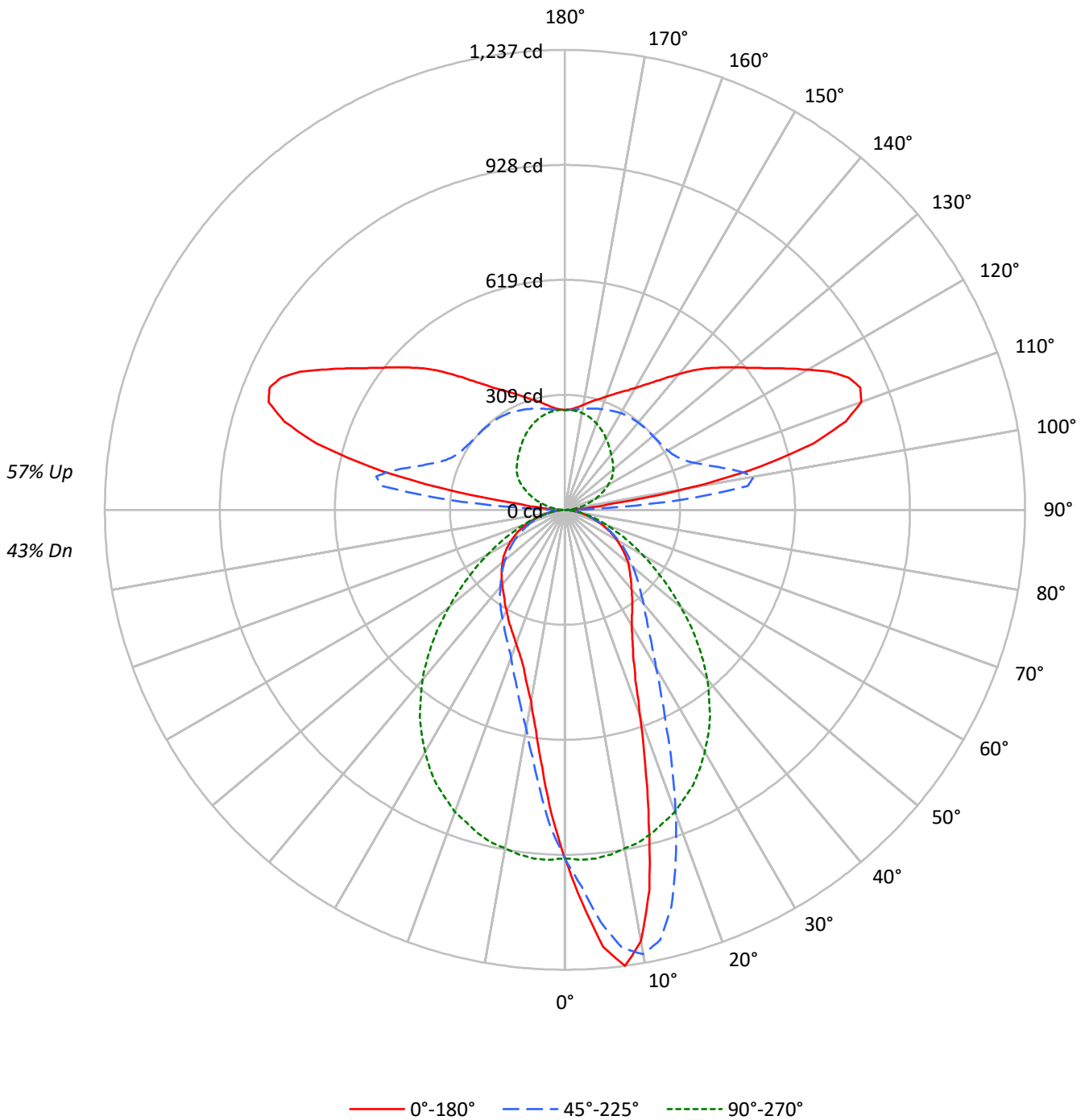
Lumens per Lamp: N/A
Luminaire Lumens: 3529.2 lumens
Efficiency: N/A
Efficacy: 127.9 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 27.6
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	105	105	105	105	96	96	96	96	79	79	79	64	64	64	49	49	49	43				43
1	97	92	89	85	88	85	82	79	70	68	66	57	55	54	44	43	43				37	
2	88	81	75	71	81	75	70	65	62	58	55	50	48	46	40	38	37				32	
3	81	72	65	59	74	66	60	55	55	51	47	45	42	39	36	33	32				27	
4	74	64	56	51	68	59	52	47	49	44	41	40	37	34	32	30	28				24	
5	68	57	50	44	62	53	46	41	44	39	35	37	33	30	29	27	25				21	
6	63	52	44	38	58	48	41	36	40	35	31	33	30	27	27	24	22				19	
7	59	47	39	34	54	43	37	32	37	32	28	31	27	24	25	22	20				17	
8	54	43	35	30	50	40	33	28	34	29	25	28	24	21	23	20	18				16	
9	51	39	32	27	47	36	30	26	31	26	22	26	22	19	21	19	17				14	
10	48	36	29	24	44	33	27	23	29	24	20	24	20	18	20	17	15				13	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	10083	10083	10083	10083	10083
5°	12751	12035	10172	8198	7533
10°	12874	13264	10105	6535	5710
15°	9697	12315	10036	5534	4829
20°	6756	9964	9907	4840	4386
25°	5152	7663	9689	4453	4114
30°	4457	6088	9340	4179	3895
35°	4135	5140	8938	3980	3741
40°	3915	4612	8373	3792	3688
45°	3784	4267	7655	3646	3666
50°	3719	3996	6805	3512	3647
55°	3581	3796	5971	3385	3663
60°	3453	3584	5147	3266	3602
65°	3245	3382	4439	3138	3533
70°	2996	3125	3777	2927	3323
75°	2712	2803	3236	2720	3036
80°	2238	2455	2560	2368	2560
85°	1766	1988	1877	2013	2038

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 8741 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.6	2.5
10°-20°	220.3	6.2
20°-30°	260.8	7.4
30°-40°	262.3	7.4
40°-50°	240.6	6.8
50°-60°	198.6	5.6
60°-70°	140.5	4.0
70°-80°	75.0	2.1
80°-90°	20.5	0.6
90°-100°	145.9	4.1
100°-110°	427.0	12.1
110°-120°	417.0	11.8
120°-130°	332.1	9.4
130°-140°	262.0	7.4
140°-150°	195.5	5.5
150°-160°	136.3	3.9
160°-170°	80.1	2.3
170°-180°	26.0	0.7
0°-30°	569.7	16.1
0°-40°	832.0	23.6
0°-60°	1271.2	36.0
0°-90°	1507.2	42.7
90°-120°	989.9	28.1
90°-150°	1779.6	50.4
90°-180°	2022.0	57.3
0°-180°	3529.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	937	937	937	937	937	
5°	1180	1114	941	759	697	112
15°	870	1105	901	497	433	240
25°	434	645	816	375	346	205
35°	315	391	680	303	285	198
45°	249	280	503	240	241	193
55°	191	202	318	180	195	171
65°	127	133	174	123	139	127
75°	65	67	78	65	73	68
85°	14	16	15	16	16	16
90°	16	14	1	14	16	9
95°	63	323	18	323	63	103
105°	692	438	63	438	692	691
115°	842	335	112	335	842	821
125°	664	312	155	312	664	601
135°	538	308	182	308	538	417
145°	421	304	207	304	421	267
155°	349	294	236	294	349	163
165°	304	282	257	282	304	87
175°	274	270	268	270	274	27
180°	269	269	269	269	269	



TEST NUMBER: P831422

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	936.7	936.7	936.7	936.7	936.7	936.7	936.7	936.7	936.7	936.7	936.7
2.5°	1055.8	1054.7	1053.6	1048.1	1042.7	1040.1	1037.5	1029.7	1021.9	1013.2	1004.5
5°	1180.1	1183.1	1186.1	1182.7	1179.2	1168.5	1157.9	1143.8	1129.6	1113.8	1097.9
7.5°	1237.4	1239.2	1240.9	1238.7	1236.6	1233.7	1230.9	1218.3	1205.7	1189.4	1173.1
10°	1177.9	1181.8	1185.7	1194.2	1202.7	1212.2	1221.8	1220.1	1218.3	1213.5	1208.7
12.5°	1047.1	1051.8	1056.6	1073.6	1090.5	1112.3	1134.0	1152.7	1171.4	1184.4	1197.4
15°	870.2	883.4	896.7	912.1	927.5	959.5	991.4	1030.8	1070.1	1105.1	1140.1
17.5°	716.7	721.7	726.7	743.2	759.8	800.0	840.2	885.6	931.0	989.0	1047.1
20°	589.8	594.4	598.9	620.7	642.4	673.9	705.4	756.5	807.6	869.9	932.3
22.5°	495.5	502.7	509.8	522.0	534.2	564.4	594.6	640.0	685.4	754.3	823.2
25°	433.8	439.0	444.2	451.6	459.0	483.1	507.2	544.6	582.0	645.2	708.5
27.5°	391.6	393.8	396.0	403.4	410.7	426.4	442.0	474.2	506.4	560.0	613.7
30°	358.6	360.1	361.6	368.1	374.7	385.3	396.0	419.2	442.5	489.8	537.2
32.5°	335.5	336.6	337.7	342.7	347.7	355.3	362.9	379.9	396.8	435.9	475.1
35°	314.7	315.3	316.0	319.7	323.4	329.0	334.7	347.5	360.3	391.2	422.0
37.5°	296.4	297.3	298.2	300.3	302.5	307.5	312.5	322.7	332.9	356.6	380.3
40°	278.6	280.1	281.7	283.2	284.7	288.8	293.0	300.8	308.6	328.2	347.7
42.5°	263.4	264.9	266.4	267.1	267.7	270.1	272.5	279.7	286.9	301.4	316.0
45°	248.6	249.3	249.9	250.6	251.2	253.2	255.1	261.4	267.7	280.3	293.0
47.5°	235.1	235.1	235.1	235.6	236.0	237.8	239.5	244.1	248.6	258.4	268.2
50°	222.1	222.1	222.1	221.5	220.8	221.9	223.0	226.5	229.9	238.6	247.3
52.5°	206.5	206.5	206.5	206.7	206.9	206.9	206.9	209.9	213.0	220.8	228.6
55°	190.8	191.7	192.5	191.9	191.2	191.7	192.1	194.1	196.0	202.3	208.6
57.5°	175.2	175.6	176.0	175.8	175.6	175.8	176.0	177.8	179.5	184.3	189.1
60°	160.4	160.4	160.4	159.9	159.5	159.9	160.4	161.3	162.1	166.5	170.8
62.5°	143.9	144.1	144.3	144.5	144.7	144.3	143.9	145.0	146.0	149.3	152.6
65°	127.4	127.6	127.8	128.4	129.1	128.7	128.2	129.3	130.4	132.8	135.2
67.5°	112.6	112.1	111.7	111.9	112.1	112.8	113.4	113.7	113.9	116.5	119.1
70°	95.2	95.6	96.1	95.8	95.6	95.8	96.1	96.7	97.4	99.3	101.3
72.5°	79.5	79.8	80.0	80.0	80.0	80.4	80.8	81.5	82.1	83.2	84.3
75°	65.2	65.2	65.2	65.6	66.1	66.3	66.5	66.5	66.5	67.4	68.2
77.5°	49.5	50.6	51.7	51.5	51.3	51.7	52.2	52.8	53.5	53.9	54.3
80°	36.1	36.1	36.1	36.3	36.5	37.2	37.8	38.2	38.7	39.6	40.4
82.5°	23.0	23.3	23.5	24.1	24.8	25.2	25.6	26.3	26.9	26.9	26.9
85°	14.3	13.9	13.5	13.9	14.3	14.8	15.2	15.4	15.6	16.1	16.5
87.5°	7.0	7.0	7.0	7.0	7.0	7.2	7.4	7.4	7.4	7.4	7.4
90°	15.8	16.3	15.8	15.2	15.8	14.7	14.1	13.6	13.1	13.6	12.0
92.5°	28.8	29.9	29.4	31.6	32.6	36.5	41.9	53.9	75.6	101.2	112.1
95°	63.1	65.3	69.1	74.0	84.3	103.9	132.8	195.9	261.7	322.7	287.3
97.5°	129.5	135.5	148.5	169.2	205.7	267.7	339.5	450.0	513.1	496.3	370.6
100°	341.2	340.6	361.9	401.6	456.5	533.8	597.5	641.5	622.5	515.3	348.2
102.5°	540.3	556.1	573.0	602.4	642.1	684.0	714.5	705.2	627.9	479.9	315.6
105°	692.1	694.9	712.3	733.0	758.0	772.1	761.8	707.4	593.7	437.5	290.0
107.5°	791.2	797.2	804.2	814.0	817.3	802.6	760.2	674.7	544.7	399.9	271.5
110°	847.8	848.9	849.9	845.6	830.4	792.3	723.7	623.6	499.0	368.9	261.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	859.2	858.6	853.2	837.4	806.4	754.7	675.8	573.0	459.3	348.2	256.3
115°	841.8	839.1	828.2	804.2	763.4	704.1	624.1	529.4	428.8	334.6	255.7
117.5°	803.7	799.9	783.6	756.9	714.5	653.0	579.5	495.7	408.6	325.4	256.3
120°	753.6	750.4	737.3	706.8	663.8	608.9	543.6	470.1	393.4	319.4	258.5
122.5°	706.8	702.5	687.8	661.1	624.1	574.1	514.8	450.0	380.9	315.6	262.3
125°	663.8	660.0	646.4	622.5	587.7	544.1	491.9	432.6	370.6	312.3	266.1
127.5°	626.8	623.6	611.1	590.4	558.8	518.6	470.7	416.8	360.8	310.7	270.4
130°	596.4	592.0	580.6	561.0	532.2	495.2	451.1	402.1	353.1	309.1	274.8
132.5°	566.4	563.7	553.9	534.3	507.7	472.9	432.6	388.5	346.1	308.5	278.1
135°	538.2	534.3	524.5	508.2	481.6	450.5	415.2	376.5	340.1	308.0	281.3
137.5°	508.2	505.0	496.8	479.9	457.1	429.3	397.8	365.1	334.6	306.9	283.5
140°	476.7	477.2	468.5	453.3	432.6	409.2	383.1	355.3	329.7	306.3	285.7
142.5°	447.3	447.8	440.2	427.1	410.3	390.7	368.9	346.1	325.4	305.3	287.3
145°	420.6	419.5	415.2	403.7	390.1	374.4	357.0	339.0	321.6	304.2	287.8
147.5°	397.8	397.2	392.9	384.7	373.8	362.4	347.7	333.0	317.8	302.5	287.8
150°	378.2	378.2	374.9	368.9	360.8	350.4	339.0	326.5	314.0	300.4	287.8
152.5°	361.9	361.9	360.2	354.8	348.8	340.6	330.8	320.5	309.6	297.6	286.2
155°	348.8	348.2	347.2	342.8	337.9	331.4	323.2	314.5	305.3	294.4	285.1
157.5°	336.3	336.3	335.2	331.9	327.6	322.1	315.6	308.0	300.4	291.7	283.5
160°	324.3	324.8	324.8	321.6	317.8	314.0	308.5	302.5	295.5	288.4	282.4
162.5°	313.4	314.0	314.0	311.2	309.1	305.8	300.9	296.0	290.6	285.1	280.2
165°	304.2	304.2	304.7	302.5	300.4	297.6	293.8	290.6	286.2	281.9	278.1
167.5°	294.9	294.9	295.5	293.8	292.7	290.6	288.4	285.7	281.9	278.6	275.9
170°	286.8	286.8	287.3	286.2	285.7	284.6	282.4	280.8	278.1	275.3	273.7
172.5°	279.1	279.7	280.8	279.7	279.7	279.1	277.5	276.4	274.2	272.6	272.1
175°	273.7	274.2	274.8	274.2	274.2	274.2	273.2	272.6	271.5	270.4	270.4
177.5°	269.9	269.9	271.0	270.4	271.0	271.0	270.4	269.9	269.3	268.8	269.3
180°	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	936.7	936.7	936.7	936.7	936.7	936.7	936.7	936.7	936.7	936.7	936.7
2.5°	1001.9	999.3	989.7	980.1	969.3	958.4	950.4	942.3	930.4	918.4	908.6
5°	1085.7	1073.6	1053.4	1033.2	1005.8	978.4	959.9	941.4	916.7	891.9	872.1
7.5°	1152.2	1131.4	1103.1	1074.9	1039.0	1003.2	969.3	935.4	897.5	859.7	828.9
10°	1194.6	1180.5	1147.9	1115.3	1067.3	1019.2	971.9	924.5	875.8	827.1	786.3
12.5°	1198.8	1200.1	1170.1	1140.1	1085.7	1031.4	973.8	916.2	854.9	793.7	746.1
15°	1162.5	1184.8	1168.3	1151.8	1097.0	1042.3	971.4	900.6	830.0	759.3	704.3
17.5°	1095.1	1143.1	1145.5	1147.9	1093.1	1038.4	959.9	881.5	801.5	721.5	663.7
20°	1003.2	1074.0	1098.3	1122.7	1078.1	1033.6	949.3	864.9	775.4	685.9	625.2
22.5°	909.3	995.3	1039.9	1084.4	1051.4	1018.4	928.6	838.9	744.3	649.8	588.3
25°	802.4	896.2	964.7	1033.2	1012.9	992.7	904.3	815.8	715.2	614.6	551.8
27.5°	709.1	804.5	887.1	969.7	965.3	961.0	873.2	785.4	682.4	579.4	518.7
30°	626.1	715.0	807.4	899.7	910.4	921.0	836.3	751.5	648.3	545.0	486.6
32.5°	552.7	630.2	729.3	828.4	849.3	870.2	793.7	717.2	615.0	512.9	456.6
35°	492.5	562.9	662.0	761.1	787.1	813.2	746.7	680.2	580.7	481.2	427.5
37.5°	439.2	498.1	594.8	691.5	723.5	755.4	695.9	636.3	543.1	449.9	400.5
40°	395.1	442.5	531.4	620.2	657.2	694.1	645.0	595.9	507.4	419.0	373.6
42.5°	358.1	400.3	480.9	561.6	597.0	632.4	590.9	549.4	470.7	392.1	350.5
45°	326.6	360.3	433.6	506.8	540.5	574.2	538.5	502.9	433.6	364.2	325.5
47.5°	297.1	326.0	388.6	451.2	481.2	511.1	483.3	455.5	396.8	338.2	303.2
50°	270.6	293.8	348.6	403.4	429.4	455.5	431.0	406.4	358.1	309.9	279.5
52.5°	247.5	266.4	312.3	358.1	380.5	402.9	381.8	360.8	322.5	284.3	257.7
55°	224.7	240.8	280.6	320.3	335.5	350.8	334.5	318.2	287.3	256.4	234.1
57.5°	203.4	217.8	250.4	283.0	294.7	306.4	291.6	276.9	253.6	230.4	211.7
60°	182.6	194.3	221.5	248.6	255.8	263.0	251.0	239.1	222.8	206.5	189.7
62.5°	163.2	173.9	194.1	214.3	219.1	223.8	214.7	205.6	193.2	180.8	167.8
65°	143.2	151.3	167.8	184.3	187.3	190.4	182.3	174.3	164.9	155.6	146.0
67.5°	124.7	130.4	143.9	157.3	157.6	157.8	151.3	144.7	139.5	134.3	126.7
70°	106.7	112.1	121.0	130.0	130.2	130.4	125.2	120.0	116.1	112.1	106.5
72.5°	88.2	92.1	98.9	105.6	105.2	104.7	101.5	98.2	95.2	92.1	88.0
75°	71.5	74.8	79.3	83.9	82.6	81.3	79.5	77.8	75.2	72.6	70.0
77.5°	56.3	58.2	60.9	63.5	62.6	61.7	60.2	58.7	56.7	54.8	53.7
80°	41.3	42.2	43.9	45.6	45.2	44.8	43.0	41.3	40.9	40.4	38.9
82.5°	28.0	29.1	29.6	30.0	29.8	29.6	28.3	26.9	26.5	26.1	25.9
85°	16.7	17.0	17.2	17.4	16.7	16.1	15.6	15.2	15.2	15.2	15.0
87.5°	7.6	7.8	7.8	7.8	7.6	7.4	7.0	6.5	6.7	7.0	7.0
90°	10.3	8.7	7.1	6.0	4.9	3.3	2.2	1.1	2.2	3.3	4.9
92.5°	83.8	55.0	37.5	27.8	22.3	17.4	12.0	8.2	12.0	17.4	22.3
95°	198.1	117.0	70.7	49.5	35.4	26.1	20.1	18.5	20.1	26.1	35.4
97.5°	220.4	126.2	80.5	57.1	43.0	34.8	29.9	29.4	29.9	34.8	43.0
100°	205.1	124.6	86.5	65.3	52.2	44.6	40.8	40.3	40.8	44.6	52.2
102.5°	192.1	126.8	93.6	74.5	63.1	56.0	52.8	51.7	52.8	56.0	63.1
105°	187.2	131.1	101.8	84.9	74.5	68.0	64.8	63.1	64.8	68.0	74.5
107.5°	186.1	138.2	112.1	96.3	86.5	80.0	76.7	75.1	76.7	80.0	86.5
110°	188.8	147.5	123.0	107.7	98.5	92.5	89.8	88.2	89.8	92.5	98.5



TEST NUMBER: P831422

CATALOG NUMBER: S123DIP-S340D585U950-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	194.3	156.7	134.4	119.7	110.5	104.5	101.8	100.1	101.8	104.5	110.5
115°	200.2	167.1	146.4	131.7	122.4	117.0	113.7	111.5	113.7	117.0	122.4
117.5°	207.9	177.9	157.3	143.7	133.3	128.4	125.7	123.0	125.7	128.4	133.3
120°	216.6	188.3	168.7	155.1	144.7	139.3	136.6	134.9	136.6	139.3	144.7
122.5°	224.7	199.2	180.1	165.4	155.6	149.6	146.9	145.3	146.9	149.6	155.6
125°	233.4	209.5	190.4	175.8	165.4	159.4	156.2	155.1	156.2	159.4	165.4
127.5°	240.5	218.7	200.2	185.6	174.1	168.1	164.3	162.7	164.3	168.1	174.1
130°	247.6	226.9	208.9	194.3	182.8	176.3	171.4	169.8	171.4	176.3	182.8
132.5°	254.1	234.0	216.6	202.4	191.0	182.8	177.4	175.2	177.4	182.8	191.0
135°	259.6	241.1	224.2	209.5	198.1	189.9	183.9	181.7	183.9	189.9	198.1
137.5°	263.9	245.9	229.6	216.0	204.6	195.9	189.9	187.7	189.9	195.9	204.6
140°	267.2	250.8	235.1	221.5	210.6	201.9	196.4	193.7	196.4	201.9	210.6
142.5°	270.4	254.7	239.4	226.9	216.0	208.4	202.4	200.2	202.4	208.4	216.0
145°	272.6	257.9	243.8	231.3	222.0	213.8	208.9	207.3	208.9	213.8	222.0
147.5°	274.2	260.6	247.6	236.7	227.4	220.4	215.5	214.4	215.5	220.4	227.4
150°	274.8	263.4	250.8	241.1	233.4	226.4	222.0	221.5	222.0	226.4	233.4
152.5°	275.9	265.0	254.7	245.4	238.9	232.9	228.5	228.5	228.5	232.9	238.9
155°	275.9	267.2	257.9	250.3	244.3	238.9	235.6	235.6	235.6	238.9	244.3
157.5°	276.4	268.3	260.6	254.7	249.2	244.3	241.6	241.1	241.6	244.3	249.2
160°	276.4	269.9	263.4	257.9	254.1	249.8	247.6	247.6	247.6	249.8	254.1
162.5°	275.9	270.4	265.0	260.6	257.4	254.1	252.5	252.5	252.5	254.1	257.4
165°	274.8	271.0	266.6	262.8	260.6	257.9	256.8	257.4	256.8	257.9	260.6
167.5°	274.2	271.0	267.7	265.0	263.4	261.2	260.6	261.2	260.6	261.2	263.4
170°	272.6	270.4	267.7	266.6	265.5	263.9	263.4	264.5	263.4	263.9	265.5
172.5°	272.1	270.4	268.3	267.7	267.2	266.1	266.1	266.6	266.1	266.1	267.2
175°	271.0	269.9	268.8	268.3	268.3	267.2	267.7	268.3	267.7	267.2	268.3
177.5°	270.4	269.3	268.8	268.8	268.8	268.3	268.8	269.3	268.8	268.3	268.8
180°	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8



TEST NUMBER: P831422

CATALOG NUMBER: S123DIP-S340D585U950-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	936.7	936.7	936.7	936.7	936.7	936.7	936.7	936.7	936.7	936.7	936.7
2.5°	898.8	890.4	881.9	875.4	868.9	857.8	846.7	844.1	841.5	837.8	834.1
5°	852.3	831.5	810.6	791.9	773.2	758.7	744.1	734.6	725.0	718.0	711.1
7.5°	798.0	766.7	735.4	713.3	691.1	670.0	648.9	642.2	635.5	626.3	617.2
10°	745.4	710.9	676.3	647.4	618.5	597.9	577.2	569.0	560.7	549.2	537.7
12.5°	698.5	660.7	622.8	593.7	564.6	544.6	524.6	512.7	500.7	494.2	487.7
15°	649.4	608.9	568.5	541.6	514.6	496.6	478.5	468.1	457.7	451.4	445.1
17.5°	605.9	565.9	525.9	500.1	474.2	457.7	441.2	432.0	422.9	418.1	413.3
20°	564.6	525.5	486.4	461.2	435.9	422.5	409.0	403.1	397.3	393.4	389.4
22.5°	526.8	488.3	449.9	428.3	406.8	396.0	385.1	381.0	376.8	373.6	370.3
25°	489.0	454.6	420.3	402.0	383.8	374.9	366.0	361.8	357.7	354.5	351.2
27.5°	458.1	425.3	392.5	376.8	361.2	354.2	347.3	344.0	340.8	337.7	334.7
30°	428.1	398.8	369.4	356.0	342.5	336.2	329.9	326.6	323.4	320.6	317.7
32.5°	400.3	375.1	349.9	337.5	325.1	319.9	314.7	310.8	306.9	304.7	302.5
35°	373.8	351.2	328.6	318.4	308.2	302.9	297.7	294.5	291.2	289.5	287.7
37.5°	351.2	331.0	310.8	301.0	291.2	286.2	281.2	278.4	275.6	274.9	274.3
40°	328.2	310.8	293.4	283.8	274.3	269.9	265.6	263.8	262.1	261.7	261.2
42.5°	309.0	292.1	275.1	266.4	257.7	254.1	250.4	249.5	248.6	249.3	249.9
45°	286.9	272.7	258.6	250.6	242.5	239.5	236.4	235.8	235.1	236.4	237.8
47.5°	268.2	255.1	242.1	234.5	226.9	224.7	222.5	222.3	222.1	223.8	225.6
50°	249.1	236.4	223.8	217.8	211.7	209.7	207.8	208.4	209.1	211.9	214.7
52.5°	231.2	219.5	207.8	202.1	196.5	195.2	193.9	195.4	196.9	199.9	203.0
55°	211.7	201.0	190.4	186.0	181.7	180.4	179.1	182.1	185.2	188.0	190.8
57.5°	193.0	183.6	174.3	170.4	166.5	166.3	166.0	168.9	171.7	174.7	177.8
60°	173.0	165.2	157.3	154.3	151.3	151.7	152.1	155.4	158.6	161.0	163.4
62.5°	154.7	148.2	141.7	138.9	136.0	137.1	138.2	141.5	144.7	147.6	150.4
65°	136.5	131.0	125.6	123.7	121.7	123.2	124.7	127.6	130.4	132.3	134.3
67.5°	119.1	114.5	110.0	108.4	106.9	108.4	110.0	112.8	115.6	117.6	119.5
70°	100.8	97.1	93.4	92.4	91.3	93.0	94.8	97.1	99.5	101.5	103.4
72.5°	83.9	81.1	78.2	78.0	77.8	79.3	80.8	83.2	85.6	86.9	88.2
75°	67.4	65.8	64.3	64.1	63.9	65.4	66.9	68.2	69.5	70.6	71.7
77.5°	52.6	51.3	50.0	50.2	50.4	51.5	52.6	53.9	55.2	55.9	56.5
80°	37.4	36.9	36.5	36.9	37.4	38.2	39.1	40.0	40.9	41.3	41.7
82.5°	25.6	25.2	24.8	25.4	26.1	26.7	27.4	28.0	28.7	28.9	29.1
85°	14.8	15.4	16.1	16.1	16.1	16.3	16.5	16.7	17.0	16.7	16.5
87.5°	7.0	7.2	7.4	7.4	7.4	7.6	7.8	7.8	7.8	7.6	7.4
90°	6.0	7.1	8.7	10.3	12.0	13.6	13.1	13.6	14.1	14.7	15.8
92.5°	27.8	37.5	55.0	83.8	112.1	101.2	75.6	53.9	41.9	36.5	32.6
95°	49.5	70.7	117.0	198.1	287.3	322.7	261.7	195.9	132.8	103.9	84.3
97.5°	57.1	80.5	126.2	220.4	370.6	496.3	513.1	450.0	339.5	267.7	205.7
100°	65.3	86.5	124.6	205.1	348.2	515.3	622.5	641.5	597.5	533.8	456.5
102.5°	74.5	93.6	126.8	192.1	315.6	479.9	627.9	705.2	714.5	684.0	642.1
105°	84.9	101.8	131.1	187.2	290.0	437.5	593.7	707.4	761.8	772.1	758.0
107.5°	96.3	112.1	138.2	186.1	271.5	399.9	544.7	674.7	760.2	802.6	817.3
110°	107.7	123.0	147.5	188.8	261.7	368.9	499.0	623.6	723.7	792.3	830.4



TEST NUMBER: P831422

CATALOG NUMBER: S123DIP-S340D585U950-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	119.7	134.4	156.7	194.3	256.3	348.2	459.3	573.0	675.8	754.7	806.4
115°	131.7	146.4	167.1	200.2	255.7	334.6	428.8	529.4	624.1	704.1	763.4
117.5°	143.7	157.3	177.9	207.9	256.3	325.4	408.6	495.7	579.5	653.0	714.5
120°	155.1	168.7	188.3	216.6	258.5	319.4	393.4	470.1	543.6	608.9	663.8
122.5°	165.4	180.1	199.2	224.7	262.3	315.6	380.9	450.0	514.8	574.1	624.1
125°	175.8	190.4	209.5	233.4	266.1	312.3	370.6	432.6	491.9	544.1	587.7
127.5°	185.6	200.2	218.7	240.5	270.4	310.7	360.8	416.8	470.7	518.6	558.8
130°	194.3	208.9	226.9	247.6	274.8	309.1	353.1	402.1	451.1	495.2	532.2
132.5°	202.4	216.6	234.0	254.1	278.1	308.5	346.1	388.5	432.6	472.9	507.7
135°	209.5	224.2	241.1	259.6	281.3	308.0	340.1	376.5	415.2	450.5	481.6
137.5°	216.0	229.6	245.9	263.9	283.5	306.9	334.6	365.1	397.8	429.3	457.1
140°	221.5	235.1	250.8	267.2	285.7	306.3	329.7	355.3	383.1	409.2	432.6
142.5°	226.9	239.4	254.7	270.4	287.3	305.3	325.4	346.1	368.9	390.7	410.3
145°	231.3	243.8	257.9	272.6	287.8	304.2	321.6	339.0	357.0	374.4	390.1
147.5°	236.7	247.6	260.6	274.2	287.8	302.5	317.8	333.0	347.7	362.4	373.8
150°	241.1	250.8	263.4	274.8	287.8	300.4	314.0	326.5	339.0	350.4	360.8
152.5°	245.4	254.7	265.0	275.9	286.2	297.6	309.6	320.5	330.8	340.6	348.8
155°	250.3	257.9	267.2	275.9	285.1	294.4	305.3	314.5	323.2	331.4	337.9
157.5°	254.7	260.6	268.3	276.4	283.5	291.7	300.4	308.0	315.6	322.1	327.6
160°	257.9	263.4	269.9	276.4	282.4	288.4	295.5	302.5	308.5	314.0	317.8
162.5°	260.6	265.0	270.4	275.9	280.2	285.1	290.6	296.0	300.9	305.8	309.1
165°	262.8	266.6	271.0	274.8	278.1	281.9	286.2	290.6	293.8	297.6	300.4
167.5°	265.0	267.7	271.0	274.2	275.9	278.6	281.9	285.7	288.4	290.6	292.7
170°	266.6	267.7	270.4	272.6	273.7	275.3	278.1	280.8	282.4	284.6	285.7
172.5°	267.7	268.3	270.4	272.1	272.1	272.6	274.2	276.4	277.5	279.1	279.7
175°	268.3	268.8	269.9	271.0	270.4	270.4	271.5	272.6	273.2	274.2	274.2
177.5°	268.8	268.8	269.3	270.4	269.3	268.8	269.3	269.9	270.4	271.0	271.0
180°	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8

TEST NUMBER: P831422

CATALOG NUMBER: S123DIP-S340D585U950-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	936.7	936.7	936.7	936.7
2.5°	832.6	831.0	825.0	818.9
5°	705.9	700.6	698.9	697.2
7.5°	616.8	616.3	607.2	598.1
10°	538.3	539.0	530.7	522.4
12.5°	482.2	476.8	476.2	475.5
15°	440.1	435.1	434.2	433.3
17.5°	410.3	407.3	406.4	405.5
20°	387.7	386.0	384.4	382.9
22.5°	368.1	366.0	364.7	363.4
25°	349.2	347.3	346.8	346.4
27.5°	332.3	329.9	329.9	329.9
30°	316.2	314.7	314.0	313.4
32.5°	301.2	299.9	299.9	299.9
35°	287.1	286.4	285.6	284.7
37.5°	274.3	274.3	273.8	273.4
40°	261.9	262.5	262.5	262.5
42.5°	250.6	251.2	251.2	251.2
45°	238.8	239.9	240.4	240.8
47.5°	227.3	229.1	229.5	229.9
50°	216.0	217.3	217.5	217.8
52.5°	204.5	206.0	207.1	208.2
55°	192.3	193.9	194.5	195.2
57.5°	179.3	180.8	181.0	181.2
60°	164.9	166.5	166.9	167.3
62.5°	151.3	152.1	152.6	153.0
65°	135.6	136.9	137.8	138.7
67.5°	120.6	121.7	121.7	121.7
70°	103.9	104.3	105.0	105.6
72.5°	88.5	88.7	88.7	88.7
75°	72.2	72.6	72.8	73.0
77.5°	56.7	56.9	56.9	56.9
80°	41.5	41.3	41.3	41.3
82.5°	28.5	27.8	27.8	27.8
85°	16.3	16.1	16.3	16.5
87.5°	7.4	7.4	7.4	7.4
90°	15.2	15.8	16.3	15.8
92.5°	31.6	29.4	29.9	28.8
95°	74.0	69.1	65.3	63.1
97.5°	169.2	148.5	135.5	129.5
100°	401.6	361.9	340.6	341.2
102.5°	602.4	573.0	556.1	540.3
105°	733.0	712.3	694.9	692.1
107.5°	814.0	804.2	797.2	791.2
110°	845.6	849.9	848.9	847.8



TEST NUMBER: P831422

CATALOG NUMBER: S123DIP-S340D585U950-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	837.4	853.2	858.6	859.2
115°	804.2	828.2	839.1	841.8
117.5°	756.9	783.6	799.9	803.7
120°	706.8	737.3	750.4	753.6
122.5°	661.1	687.8	702.5	706.8
125°	622.5	646.4	660.0	663.8
127.5°	590.4	611.1	623.6	626.8
130°	561.0	580.6	592.0	596.4
132.5°	534.3	553.9	563.7	566.4
135°	508.2	524.5	534.3	538.2
137.5°	479.9	496.8	505.0	508.2
140°	453.3	468.5	477.2	476.7
142.5°	427.1	440.2	447.8	447.3
145°	403.7	415.2	419.5	420.6
147.5°	384.7	392.9	397.2	397.8
150°	368.9	374.9	378.2	378.2
152.5°	354.8	360.2	361.9	361.9
155°	342.8	347.2	348.2	348.8
157.5°	331.9	335.2	336.3	336.3
160°	321.6	324.8	324.8	324.3
162.5°	311.2	314.0	314.0	313.4
165°	302.5	304.7	304.2	304.2
167.5°	293.8	295.5	294.9	294.9
170°	286.2	287.3	286.8	286.8
172.5°	279.7	280.8	279.7	279.1
175°	274.2	274.8	274.2	273.7
177.5°	270.4	271.0	269.9	269.9
180°	268.8	268.8	268.8	268.8



TEST NUMBER: P831422

CATALOG NUMBER: S123DIP-S340D585U950-4F0-1E-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	10.87	11.64	11.90	12.67	14.04	13.11	13.88	14.13	14.91	16.28
	3H	12.51	13.20	13.55	14.24	15.63	14.53	15.22	15.56	16.25	17.65
	4H	13.09	13.74	14.13	14.78	16.18	14.97	15.63	16.02	16.67	18.07
	6H	13.45	14.05	14.51	15.10	16.51	15.25	15.85	16.30	16.89	18.30
	8H	13.55	14.12	14.61	15.18	16.59	15.31	15.88	16.37	16.94	18.34
	12H	13.59	14.13	14.65	15.18	16.62	15.32	15.86	16.39	16.92	18.35
4H	2H	11.44	12.09	12.49	13.13	14.53	13.26	13.92	14.32	14.95	16.36
	3H	13.26	13.80	14.32	14.87	16.28	14.87	15.42	15.93	16.48	17.90
	4H	13.95	14.45	15.02	15.51	16.95	15.45	15.95	16.52	17.01	18.45
	6H	14.42	14.85	15.50	15.93	17.36	15.85	16.28	16.93	17.36	18.79
	8H	14.56	14.96	15.63	16.03	17.48	15.96	16.36	17.04	17.44	18.88
	12H	14.62	14.98	15.71	16.07	17.52	16.00	16.36	17.10	17.45	18.90
8H	4H	14.21	14.61	15.29	15.68	17.13	15.55	15.95	16.63	17.03	18.47
	6H	14.80	15.13	15.90	16.24	17.69	16.05	16.38	17.15	17.50	18.94
	8H	15.01	15.29	16.11	16.39	17.85	16.23	16.52	17.34	17.62	19.08
	12H	15.13	15.38	16.23	16.47	17.97	16.33	16.58	17.44	17.68	19.18
12H	4H	14.21	14.57	15.30	15.66	17.11	15.52	15.88	16.62	16.97	18.42
	6H	14.85	15.14	15.95	16.24	17.70	16.07	16.35	17.17	17.45	18.92
	8H	15.08	15.33	16.19	16.43	17.93	16.26	16.52	17.37	17.61	19.11