

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: P831393

Luminaire Tested: S123DIP-S340D365U950-4F0-1E-UDD-G

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831393
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-5)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D365U950-4F0-1E-UDD-G
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: -

Summary

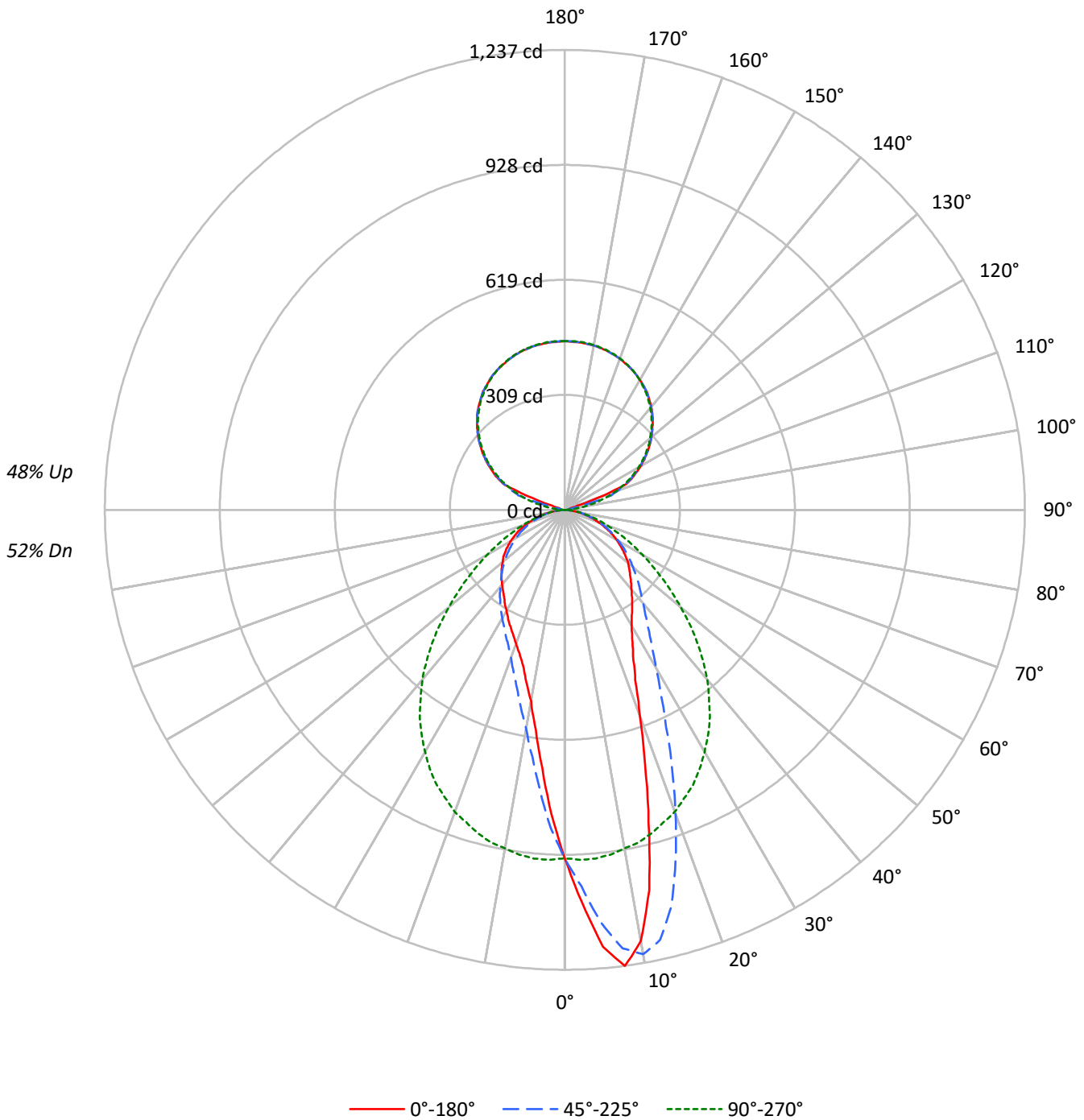
Lumens per Lamp: N/A
Luminaire Lumens: 2889.9 lumens
Efficiency: N/A
Efficacy: 129.0 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 22.4
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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	58	58	58	52				
1	99	95	91	88	91	88	85	82	75	73	70	63	61	60	52	51	50	45				
2	90	83	77	73	84	77	72	68	66	63	59	56	53	51	47	45	43	39				
3	83	74	67	61	77	69	63	58	59	54	51	50	47	44	42	39	37	33				
4	76	66	58	52	70	61	55	50	53	48	44	45	41	38	38	35	33	29				
5	70	59	51	45	65	55	48	43	48	42	38	41	37	34	35	32	29	26				
6	65	53	46	40	60	50	43	38	43	38	34	37	33	30	32	29	26	23				
7	60	48	41	35	56	45	39	34	40	34	30	34	30	27	29	26	24	21				
8	56	44	37	32	52	42	35	30	36	31	27	32	27	24	27	24	21	19				
9	53	41	33	29	49	38	32	27	34	28	25	29	25	22	25	22	20	18				
10	49	38	31	26	46	35	29	25	31	26	22	27	23	20	24	20	18	16				

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	3.1
10°-20°	220.3	7.6
20°-30°	260.8	9.0
30°-40°	262.3	9.1
40°-50°	240.6	8.3
50°-60°	198.6	6.9
60°-70°	140.5	4.9
70°-80°	75.0	2.6
80°-90°	19.9	0.7
90°-100°	16.0	0.6
100°-110°	77.3	2.7
110°-120°	189.6	6.6
120°-130°	240.7	8.3
130°-140°	257.1	8.9
140°-150°	240.4	8.3
150°-160°	193.9	6.7
160°-170°	125.1	4.3
170°-180°	43.1	1.5
0°-30°	569.7	19.7
0°-40°	832.0	28.8
0°-60°	1271.2	44.0
0°-90°	1506.6	52.1
90°-120°	282.9	9.8
90°-150°	1021.1	35.3
90°-180°	1383.0	47.9
0°-180°	2889.9	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°	10	8	0	8	10	5
95°	13	10	21	10	13	11
105°	15	74	100	74	15	31
115°	198	194	188	194	198	186
125°	271	270	266	270	271	242
135°	334	334	331	334	334	258
145°	385	385	382	385	385	241
155°	420	420	420	420	420	194
165°	442	442	443	442	442	125
175°	452	452	454	452	452	43
180°	454	454	454	454	454	

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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°	10.1	10.0	9.8	9.7	9.5	9.3	9.0	8.7	8.4	8.1	7.1
92.5°	11.5	11.4	11.3	11.2	11.2	10.9	10.3	9.8	9.3	8.8	8.1
95°	12.8	12.8	12.8	12.8	12.8	12.5	12.0	11.5	11.0	10.5	9.6
97.5°	13.8	13.7	13.7	13.6	13.5	13.2	12.6	12.0	11.4	10.8	14.6
100°	14.2	14.1	14.0	13.9	13.9	13.5	12.9	12.3	11.7	11.1	22.8
102.5°	14.5	14.3	14.2	14.0	13.9	15.1	17.5	20.0	22.5	24.9	38.0
105°	14.8	14.7	14.5	14.4	14.2	20.8	34.0	47.3	60.6	73.8	80.6
107.5°	35.1	44.9	54.7	64.5	74.3	85.0	96.5	108.1	119.6	131.1	130.0
110°	92.7	103.4	114.1	124.8	135.6	142.1	144.6	147.1	149.6	152.0	151.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	175.6	175.8	175.9	176.1	176.2	176.0	175.3	174.6	174.0	173.3	172.5
115°	198.2	197.9	197.6	197.3	197.0	196.5	195.8	195.0	194.3	193.5	192.8
117.5°	216.4	216.4	216.3	216.2	216.1	215.8	215.2	214.6	214.0	213.4	213.0
120°	235.3	235.3	235.3	235.3	235.3	235.0	234.4	233.8	233.2	232.6	232.4
122.5°	253.8	253.8	253.7	253.6	253.5	253.3	252.9	252.6	252.2	251.8	251.5
125°	271.0	270.9	270.7	270.6	270.4	270.3	270.1	270.0	269.8	269.7	269.4
127.5°	287.9	288.0	288.2	288.3	288.5	288.5	288.2	288.0	287.8	287.6	287.2
130°	304.1	304.2	304.4	304.5	304.7	304.6	304.3	304.0	303.7	303.4	303.1
132.5°	318.9	319.1	319.4	319.6	319.8	319.8	319.5	319.2	318.9	318.6	318.3
135°	334.1	334.3	334.5	334.8	335.0	335.0	334.8	334.5	334.3	334.1	333.8
137.5°	348.6	348.7	348.9	349.0	349.2	349.1	348.7	348.3	347.9	347.6	347.4
140°	361.4	361.5	361.7	361.8	362.0	361.9	361.6	361.3	361.0	360.7	360.5
142.5°	373.2	373.4	373.6	373.9	374.1	374.1	373.9	373.6	373.4	373.2	373.0
145°	385.3	385.3	385.3	385.3	385.3	385.2	385.1	384.9	384.8	384.6	384.5
147.5°	394.1	394.5	394.8	395.2	395.6	395.7	395.5	395.4	395.2	395.1	394.9
150°	404.2	404.4	404.6	404.9	405.1	405.1	405.0	404.8	404.7	404.5	404.4
152.5°	412.3	412.7	413.0	413.4	413.8	413.8	413.5	413.2	412.9	412.6	412.6
155°	419.7	420.2	420.6	421.1	421.5	421.5	421.2	420.8	420.4	420.0	420.0
157.5°	426.1	426.7	427.3	427.9	428.5	428.6	428.1	427.7	427.2	426.8	426.9
160°	432.2	432.7	433.2	433.8	434.3	434.3	433.9	433.4	433.0	432.5	432.6
162.5°	437.9	438.4	438.8	439.3	439.7	439.7	439.1	438.6	438.1	437.6	437.6
165°	442.3	442.8	443.3	443.9	444.4	444.4	443.8	443.2	442.6	442.0	442.0
167.5°	445.7	446.3	446.9	447.5	448.1	448.1	447.5	446.9	446.3	445.7	445.7
170°	448.7	449.3	449.9	450.5	451.1	451.1	450.5	449.9	449.3	448.7	448.7
172.5°	450.4	451.1	451.7	452.4	453.1	453.1	452.5	451.9	451.3	450.7	450.6
175°	452.1	452.7	453.3	453.9	454.5	454.5	454.0	453.5	452.9	452.4	452.3
177.5°	452.4	453.2	453.9	454.7	455.4	455.5	454.9	454.3	453.7	453.1	453.0
180°	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8



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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°	6.1	5.2	4.2	3.3	2.6	1.8	1.1	0.3	1.1	1.8	2.6
92.5°	7.4	6.7	6.1	6.0	6.4	6.9	7.3	7.8	7.3	6.9	6.4
95°	8.8	8.0	7.2	8.3	11.3	14.4	17.5	20.6	17.5	14.4	11.3
97.5°	18.4	22.2	26.1	29.0	31.1	33.2	35.3	37.4	35.3	33.2	31.1
100°	34.5	46.2	57.9	63.0	61.5	60.0	58.5	57.0	58.5	60.0	61.5
102.5°	51.0	64.1	77.1	83.1	82.1	81.2	80.2	79.2	80.2	81.2	82.1
105°	87.3	94.1	100.8	103.8	102.9	102.1	101.3	100.5	101.3	102.1	102.9
107.5°	128.9	127.8	126.6	125.7	125.1	124.4	123.7	123.0	123.7	124.4	125.1
110°	150.4	149.6	148.7	148.0	147.4	146.8	146.2	145.6	146.2	146.8	147.4



TEST NUMBER: P831393

CATALOG NUMBER: S123DIP-S340D365U950-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	171.6	170.8	170.0	169.3	168.8	168.3	167.7	167.2	167.7	168.3	168.8
115°	192.2	191.5	190.8	190.2	189.8	189.3	188.9	188.4	188.9	189.3	189.8
117.5°	212.6	212.3	211.9	211.4	210.9	210.4	209.9	209.3	209.9	210.4	210.9
120°	232.2	231.9	231.7	231.3	230.6	229.9	229.2	228.6	229.2	229.9	230.6
122.5°	251.2	250.9	250.6	250.2	249.7	249.2	248.6	248.1	248.6	249.2	249.7
125°	269.1	268.8	268.5	268.0	267.4	266.8	266.2	265.6	266.2	266.8	267.4
127.5°	286.8	286.4	286.1	285.6	285.0	284.4	283.8	283.2	283.8	284.4	285.0
130°	302.8	302.5	302.2	301.8	301.2	300.6	300.0	299.4	300.0	300.6	301.2
132.5°	318.1	317.9	317.7	317.3	316.7	316.1	315.5	314.9	315.5	316.1	316.7
135°	333.5	333.2	332.9	332.5	332.1	331.6	331.2	330.7	331.2	331.6	332.1
137.5°	347.3	347.1	347.0	346.6	346.0	345.4	344.8	344.2	344.8	345.4	346.0
140°	360.3	360.0	359.8	359.5	359.0	358.6	358.1	357.7	358.1	358.6	359.0
142.5°	372.7	372.5	372.3	371.9	371.5	371.1	370.6	370.2	370.6	371.1	371.5
145°	384.3	384.2	384.0	383.7	383.2	382.7	382.1	381.6	382.1	382.7	383.2
147.5°	394.8	394.6	394.5	394.2	393.9	393.5	393.1	392.7	393.1	393.5	393.9
150°	404.2	404.1	403.9	403.8	403.5	403.3	403.1	402.9	403.1	403.3	403.5
152.5°	412.5	412.4	412.3	412.3	412.2	412.1	412.0	412.0	412.0	412.1	412.2
155°	419.9	419.8	419.7	419.8	419.9	420.1	420.2	420.4	420.2	420.1	419.9
157.5°	426.9	427.0	427.1	427.1	427.1	427.1	427.1	427.1	427.1	427.1	427.1
160°	432.7	432.7	432.8	432.9	433.0	433.0	433.1	433.2	433.1	433.0	433.0
162.5°	437.7	437.8	437.9	438.0	438.2	438.5	438.7	438.9	438.7	438.5	438.2
165°	442.1	442.2	442.3	442.4	442.6	442.9	443.1	443.3	443.1	442.9	442.6
167.5°	445.7	445.7	445.7	445.8	446.1	446.4	446.7	447.0	446.7	446.4	446.1
170°	448.7	448.7	448.7	448.8	449.1	449.4	449.7	450.0	449.7	449.4	449.1
172.5°	450.6	450.5	450.4	450.6	450.9	451.3	451.7	452.1	451.7	451.3	450.9
175°	452.3	452.2	452.1	452.3	452.6	453.0	453.4	453.8	453.4	453.0	452.6
177.5°	452.9	452.9	452.8	452.9	453.3	453.7	454.1	454.4	454.1	453.7	453.3
180°	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8



TEST NUMBER: P831393

CATALOG NUMBER: S123DIP-S340D365U950-4F0-1E-UDD-G

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°	3.3	4.2	5.2	6.1	7.1	8.1	8.4	8.7	9.0	9.3	9.5
92.5°	6.0	6.1	6.7	7.4	8.1	8.8	9.3	9.8	10.3	10.9	11.2
95°	8.3	7.2	8.0	8.8	9.6	10.5	11.0	11.5	12.0	12.5	12.8
97.5°	29.0	26.1	22.2	18.4	14.6	10.8	11.4	12.0	12.6	13.2	13.5
100°	63.0	57.9	46.2	34.5	22.8	11.1	11.7	12.3	12.9	13.5	13.9
102.5°	83.1	77.1	64.1	51.0	38.0	24.9	22.5	20.0	17.5	15.1	13.9
105°	103.8	100.8	94.1	87.3	80.6	73.8	60.6	47.3	34.0	20.8	14.2
107.5°	125.7	126.6	127.8	128.9	130.0	131.1	119.6	108.1	96.5	85.0	74.3
110°	148.0	148.7	149.6	150.4	151.2	152.0	149.6	147.1	144.6	142.1	135.6



TEST NUMBER: P831393

CATALOG NUMBER: S123DIP-S340D365U950-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	169.3	170.0	170.8	171.6	172.5	173.3	174.0	174.6	175.3	176.0	176.2
115°	190.2	190.8	191.5	192.2	192.8	193.5	194.3	195.0	195.8	196.5	197.0
117.5°	211.4	211.9	212.3	212.6	213.0	213.4	214.0	214.6	215.2	215.8	216.1
120°	231.3	231.7	231.9	232.2	232.4	232.6	233.2	233.8	234.4	235.0	235.3
122.5°	250.2	250.6	250.9	251.2	251.5	251.8	252.2	252.6	252.9	253.3	253.5
125°	268.0	268.5	268.8	269.1	269.4	269.7	269.8	270.0	270.1	270.3	270.4
127.5°	285.6	286.1	286.4	286.8	287.2	287.6	287.8	288.0	288.2	288.5	288.5
130°	301.8	302.2	302.5	302.8	303.1	303.4	303.7	304.0	304.3	304.6	304.7
132.5°	317.3	317.7	317.9	318.1	318.3	318.6	318.9	319.2	319.5	319.8	319.8
135°	332.5	332.9	333.2	333.5	333.8	334.1	334.3	334.5	334.8	335.0	335.0
137.5°	346.6	347.0	347.1	347.3	347.4	347.6	347.9	348.3	348.7	349.1	349.2
140°	359.5	359.8	360.0	360.3	360.5	360.7	361.0	361.3	361.6	361.9	362.0
142.5°	371.9	372.3	372.5	372.7	373.0	373.2	373.4	373.6	373.9	374.1	374.1
145°	383.7	384.0	384.2	384.3	384.5	384.6	384.8	384.9	385.1	385.2	385.3
147.5°	394.2	394.5	394.6	394.8	394.9	395.1	395.2	395.4	395.5	395.7	395.6
150°	403.8	403.9	404.1	404.2	404.4	404.5	404.7	404.8	405.0	405.1	405.1
152.5°	412.3	412.3	412.4	412.5	412.6	412.6	412.9	413.2	413.5	413.8	413.8
155°	419.8	419.7	419.8	419.9	420.0	420.0	420.4	420.8	421.2	421.5	421.5
157.5°	427.1	427.1	427.0	426.9	426.9	426.8	427.2	427.7	428.1	428.6	428.5
160°	432.9	432.8	432.7	432.7	432.6	432.5	433.0	433.4	433.9	434.3	434.3
162.5°	438.0	437.9	437.8	437.7	437.6	437.6	438.1	438.6	439.1	439.7	439.7
165°	442.4	442.3	442.2	442.1	442.0	442.0	442.6	443.2	443.8	444.4	444.4
167.5°	445.8	445.7	445.7	445.7	445.7	445.7	446.3	446.9	447.5	448.1	448.1
170°	448.8	448.7	448.7	448.7	448.7	448.7	449.3	449.9	450.5	451.1	451.1
172.5°	450.6	450.4	450.5	450.6	450.6	450.7	451.3	451.9	452.5	453.1	453.1
175°	452.3	452.1	452.2	452.3	452.3	452.4	452.9	453.5	454.0	454.5	454.5
177.5°	452.9	452.8	452.9	452.9	453.0	453.1	453.7	454.3	454.9	455.5	455.4
180°	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8

TEST NUMBER: P831393

CATALOG NUMBER: S123DIP-S340D365U950-4F0-1E-UDD-G

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°	9.7	9.8	10.0	10.1
92.5°	11.2	11.3	11.4	11.5
95°	12.8	12.8	12.8	12.8
97.5°	13.6	13.7	13.7	13.8
100°	13.9	14.0	14.1	14.2
102.5°	14.0	14.2	14.3	14.5
105°	14.4	14.5	14.7	14.8
107.5°	64.5	54.7	44.9	35.1
110°	124.8	114.1	103.4	92.7



TEST NUMBER: P831393

CATALOG NUMBER: S123DIP-S340D365U950-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	176.1	175.9	175.8	175.6
115°	197.3	197.6	197.9	198.2
117.5°	216.2	216.3	216.4	216.4
120°	235.3	235.3	235.3	235.3
122.5°	253.6	253.7	253.8	253.8
125°	270.6	270.7	270.9	271.0
127.5°	288.3	288.2	288.0	287.9
130°	304.5	304.4	304.2	304.1
132.5°	319.6	319.4	319.1	318.9
135°	334.8	334.5	334.3	334.1
137.5°	349.0	348.9	348.7	348.6
140°	361.8	361.7	361.5	361.4
142.5°	373.9	373.6	373.4	373.2
145°	385.3	385.3	385.3	385.3
147.5°	395.2	394.8	394.5	394.1
150°	404.9	404.6	404.4	404.2
152.5°	413.4	413.0	412.7	412.3
155°	421.1	420.6	420.2	419.7
157.5°	427.9	427.3	426.7	426.1
160°	433.8	433.2	432.7	432.2
162.5°	439.3	438.8	438.4	437.9
165°	443.9	443.3	442.8	442.3
167.5°	447.5	446.9	446.3	445.7
170°	450.5	449.9	449.3	448.7
172.5°	452.4	451.7	451.1	450.4
175°	453.9	453.3	452.7	452.1
177.5°	454.7	453.9	453.2	452.4
180°	453.8	453.8	453.8	453.8



TEST NUMBER: P831393

CATALOG NUMBER: S123DIP-S340D365U950-4F0-1E-UDD-G

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	11.79	12.64	12.74	13.59	14.84	14.03	14.87	14.98	15.83	17.07
	3H	13.44	14.19	14.40	15.16	16.43	15.45	16.21	16.41	17.18	18.44
	4H	14.02	14.73	14.99	15.70	16.98	15.90	16.62	16.88	17.59	18.86
	6H	14.39	15.04	15.37	16.02	17.31	16.18	16.84	17.16	17.81	19.10
	8H	14.48	15.11	15.47	16.10	17.38	16.24	16.87	17.23	17.86	19.14
	12H	14.53	15.12	15.52	16.11	17.42	16.26	16.85	17.25	17.84	19.15
4H	2H	12.37	13.08	13.34	14.05	15.33	14.19	14.91	15.17	15.88	17.15
	3H	14.19	14.79	15.18	15.79	17.08	15.81	16.40	16.80	17.40	18.69
	4H	14.89	15.43	15.89	16.43	17.74	16.39	16.94	17.39	17.93	19.24
	6H	15.37	15.83	16.37	16.85	18.16	16.80	17.26	17.80	18.28	19.59
	8H	15.50	15.94	16.51	16.95	18.27	16.91	17.34	17.92	18.35	19.68
	12H	15.57	15.96	16.59	16.99	18.32	16.95	17.34	17.98	18.37	19.70
8H	4H	15.16	15.59	16.16	16.60	17.93	16.50	16.93	17.50	17.94	19.27
	6H	15.74	16.10	16.78	17.16	18.48	17.00	17.36	18.03	18.41	19.73
	8H	15.95	16.27	16.99	17.31	18.65	17.18	17.49	18.22	18.53	19.87
	12H	16.07	16.35	17.12	17.38	18.77	17.28	17.56	18.32	18.59	19.98
12H	4H	15.16	15.55	16.18	16.57	17.90	16.47	16.86	17.50	17.89	19.22
	6H	15.80	16.11	16.84	17.15	18.49	17.01	17.33	18.05	18.37	19.71
	8H	16.03	16.31	17.07	17.34	18.72	17.21	17.49	18.26	18.52	19.91