

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: P831380

Luminaire Tested: S123DIP-S340D365U850-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831380
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-S340D365U850-4F0-1E-UDD-G4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: -

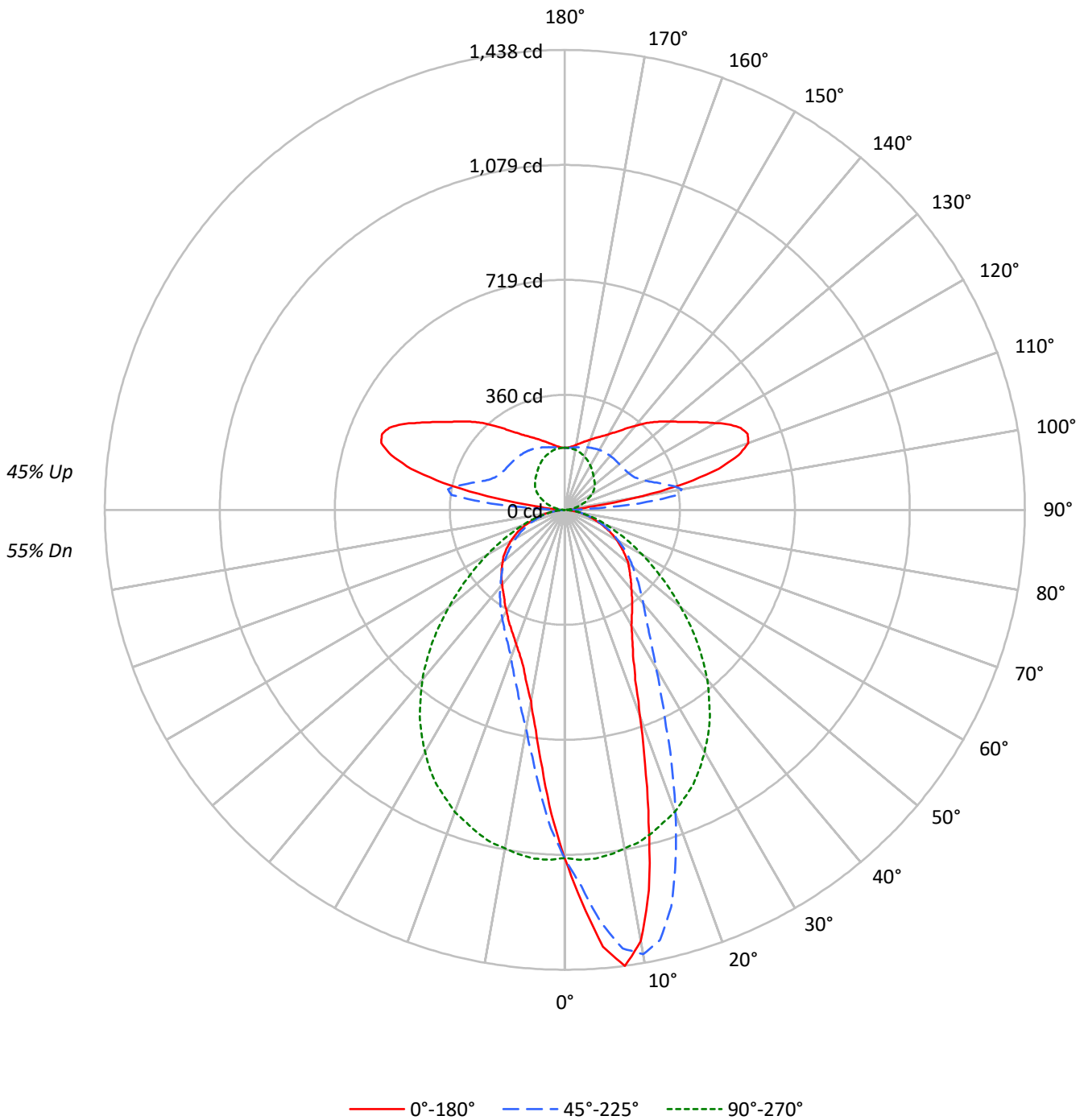
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3207.7 lumens
Efficiency: N/A
Efficacy: 143.2 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	86	86	86	73	73	73	60	60	60	55				
1	99	95	91	88	92	89	85	82	76	74	72	65	63	62	54	53	52	47				
2	91	84	78	73	84	78	73	69	67	64	60	58	55	52	48	47	45	40				
3	83	74	67	62	77	69	63	58	60	55	52	52	48	45	44	41	39	35				
4	77	66	59	53	71	62	55	50	54	49	45	46	43	39	39	37	34	31				
5	71	60	52	46	66	56	49	44	49	43	39	42	38	35	36	33	30	27				
6	66	54	46	40	61	51	44	38	44	39	35	38	34	31	33	30	27	24				
7	61	49	41	36	57	46	39	34	40	35	31	35	31	28	30	27	25	22				
8	57	45	37	32	53	42	35	31	37	32	28	33	28	25	28	25	22	20				
9	53	41	34	29	49	39	32	28	34	29	25	30	26	23	26	23	20	18				
10	50	38	31	26	46	36	29	25	32	27	23	28	24	21	25	21	19	17				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	11720	11720	11720	11720	11720
5°	14822	13989	11825	9529	8756
10°	14966	15419	11746	7596	6638
15°	11272	14315	11666	6433	5613
20°	7853	11584	11518	5625	5098
25°	5989	8909	11264	5176	4783
30°	5180	7077	10858	4857	4528
35°	4807	5975	10390	4628	4348
40°	4551	5361	9733	4409	4288
45°	4399	4961	8899	4238	4261
50°	4324	4645	7911	4083	4238
55°	4162	4414	6942	3935	4258
60°	4013	4166	5983	3795	4187
65°	3769	3933	5160	3647	4106
70°	3484	3635	4390	3402	3865
75°	3152	3256	3760	3161	3531
80°	2597	2851	2975	2758	2975
85°	2062	2309	2186	2334	2371

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 10161 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.9	3.2
10°-20°	256.1	8.0
20°-30°	303.2	9.5
30°-40°	304.9	9.5
40°-50°	279.7	8.7
50°-60°	230.9	7.2
60°-70°	163.3	5.1
70°-80°	87.2	2.7
80°-90°	23.2	0.7
90°-100°	105.1	3.3
100°-110°	307.6	9.6
110°-120°	300.4	9.4
120°-130°	239.2	7.5
130°-140°	188.7	5.9
140°-150°	140.8	4.4
150°-160°	98.2	3.1
160°-170°	57.7	1.8
170°-180°	18.8	0.6
0°-30°	662.3	20.6
0°-40°	967.1	30.2
0°-60°	1477.7	46.1
0°-90°	1751.4	54.6
90°-120°	713.0	22.2
90°-150°	1281.7	40.0
90°-180°	1456.0	45.4
0°-180°	3207.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1089	1089	1089	1089	1089	
5°	1372	1295	1094	882	810	131
15°	1012	1285	1047	577	504	279
25°	504	750	948	436	403	238
35°	366	455	791	352	331	230
45°	289	326	585	278	280	224
55°	222	235	370	210	227	198
65°	148	154	203	143	161	147
75°	76	78	90	76	85	80
85°	17	19	18	19	19	19
90°	11	10	1	10	11	7
95°	46	232	13	232	46	74
105°	498	315	46	315	498	497
115°	606	241	80	241	606	591
125°	478	225	112	225	478	433
135°	388	222	131	222	388	301
145°	303	219	149	219	303	192
155°	251	212	170	212	251	117
165°	219	203	185	203	219	63
175°	197	195	193	195	197	19
180°	194	194	194	194	194	



TEST NUMBER: P831380

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8
2.5°	1227.3	1226.0	1224.8	1218.4	1212.1	1209.1	1206.1	1197.0	1187.9	1177.8	1167.7
5°	1371.8	1375.3	1378.9	1374.8	1370.8	1358.4	1346.0	1329.6	1313.2	1294.7	1276.3
7.5°	1438.5	1440.5	1442.5	1440.0	1437.5	1434.2	1430.9	1416.3	1401.6	1382.7	1363.7
10°	1369.3	1373.8	1378.4	1388.2	1398.1	1409.2	1420.3	1418.3	1416.3	1410.7	1405.1
12.5°	1217.2	1222.7	1228.3	1248.0	1267.7	1293.0	1318.2	1340.0	1361.7	1376.8	1392.0
15°	1011.5	1026.9	1042.4	1060.3	1078.2	1115.4	1152.5	1198.2	1244.0	1284.6	1325.3
17.5°	833.2	839.0	844.8	864.0	883.2	929.9	976.7	1029.5	1082.3	1149.7	1217.2
20°	685.6	690.9	696.3	721.5	746.8	783.4	820.0	879.4	938.8	1011.3	1083.8
22.5°	576.0	584.3	592.7	606.8	621.0	656.1	691.2	744.0	796.8	876.9	957.0
25°	504.3	510.3	516.4	525.0	533.6	561.6	589.6	633.1	676.5	750.1	823.6
27.5°	455.2	457.8	460.3	468.9	477.5	495.7	513.9	551.2	588.6	651.0	713.4
30°	416.8	418.6	420.4	428.0	435.5	447.9	460.3	487.3	514.4	569.4	624.5
32.5°	390.1	391.3	392.6	398.4	404.2	413.1	421.9	441.6	461.3	506.8	552.3
35°	365.8	366.6	367.3	371.6	375.9	382.5	389.1	404.0	418.9	454.7	490.6
37.5°	344.6	345.6	346.6	349.1	351.7	357.5	363.3	375.2	387.0	414.6	442.1
40°	323.9	325.6	327.4	329.2	330.9	335.7	340.5	349.6	358.7	381.5	404.2
42.5°	306.2	308.0	309.7	310.5	311.2	314.0	316.8	325.1	333.5	350.4	367.3
45°	289.0	289.8	290.5	291.3	292.0	294.3	296.6	303.9	311.2	325.9	340.5
47.5°	273.3	273.3	273.3	273.9	274.4	276.4	278.4	283.7	289.0	300.4	311.7
50°	258.2	258.2	258.2	257.4	256.7	257.9	259.2	263.2	267.3	277.4	287.5
52.5°	240.0	240.0	240.0	240.3	240.5	240.5	240.5	244.0	247.6	256.7	265.8
55°	221.8	222.8	223.8	223.1	222.3	222.8	223.3	225.6	227.9	235.2	242.5
57.5°	203.6	204.1	204.6	204.4	204.1	204.4	204.6	206.7	208.7	214.2	219.8
60°	186.4	186.4	186.4	185.9	185.4	185.9	186.4	187.5	188.5	193.5	198.6
62.5°	167.2	167.5	167.7	168.0	168.3	167.7	167.2	168.5	169.8	173.6	177.3
65°	148.0	148.3	148.5	149.3	150.1	149.6	149.1	150.3	151.6	154.4	157.1
67.5°	130.9	130.4	129.9	130.1	130.4	131.1	131.9	132.1	132.4	135.4	138.4
70°	110.7	111.2	111.7	111.4	111.2	111.4	111.7	112.4	113.2	115.5	117.7
72.5°	92.5	92.7	93.0	93.0	93.0	93.5	94.0	94.7	95.5	96.8	98.0
75°	75.8	75.8	75.8	76.3	76.8	77.1	77.3	77.3	77.3	78.3	79.3
77.5°	57.6	58.9	60.1	59.9	59.6	60.1	60.6	61.4	62.1	62.7	63.2
80°	41.9	41.9	41.9	42.2	42.4	43.2	44.0	44.5	45.0	46.0	47.0
82.5°	26.8	27.0	27.3	28.0	28.8	29.3	29.8	30.6	31.3	31.3	31.3
85°	16.7	16.2	15.7	16.2	16.7	17.2	17.7	17.9	18.2	18.7	19.2
87.5°	8.1	8.1	8.1	8.1	8.1	8.3	8.6	8.6	8.6	8.6	8.6
90°	11.4	11.8	11.4	11.0	11.4	10.6	10.2	9.8	9.4	9.8	8.6
92.5°	20.8	21.6	21.2	22.7	23.5	26.3	30.2	38.8	54.5	72.9	80.7
95°	45.5	47.0	49.8	53.3	60.7	74.9	95.6	141.1	188.5	232.4	206.9
97.5°	93.3	97.6	107.0	121.9	148.1	192.8	244.5	324.1	369.6	357.4	266.9
100°	245.7	245.3	260.6	289.2	328.8	384.5	430.3	462.0	448.3	371.1	250.8
102.5°	389.2	400.5	412.7	433.8	462.4	492.6	514.6	507.9	452.3	345.7	227.3
105°	498.5	500.5	513.0	527.9	545.9	556.1	548.7	509.5	427.6	315.1	208.9
107.5°	569.8	574.1	579.2	586.3	588.6	578.1	547.5	486.0	392.3	288.0	195.6
110°	610.6	611.4	612.1	609.0	598.0	570.6	521.2	449.1	359.4	265.7	188.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	618.8	618.4	614.5	603.1	580.8	543.6	486.7	412.7	330.8	250.8	184.6
115°	606.3	604.3	596.5	579.2	549.8	507.1	449.5	381.3	308.8	241.0	184.2
117.5°	578.8	576.1	564.3	545.1	514.6	470.3	417.4	357.0	294.3	234.4	184.6
120°	542.8	540.4	531.0	509.1	478.1	438.5	391.5	338.6	283.3	230.0	186.2
122.5°	509.1	505.9	495.4	476.2	449.5	413.5	370.7	324.1	274.3	227.3	188.9
125°	478.1	475.4	465.6	448.3	423.3	391.9	354.3	311.6	266.9	225.0	191.6
127.5°	451.5	449.1	440.1	425.2	402.5	373.5	339.0	300.2	259.8	223.8	194.8
130°	429.5	426.4	418.2	404.0	383.3	356.6	324.9	289.6	254.3	222.6	197.9
132.5°	408.0	406.0	399.0	384.8	365.6	340.6	311.6	279.8	249.2	222.2	200.3
135°	387.6	384.8	377.8	366.0	346.8	324.5	299.0	271.2	244.9	221.8	202.6
137.5°	366.0	363.7	357.8	345.7	329.2	309.2	286.5	263.0	241.0	221.0	204.2
140°	343.3	343.7	337.4	326.5	311.6	294.7	275.9	255.9	237.5	220.6	205.7
142.5°	322.1	322.5	317.0	307.6	295.5	281.4	265.7	249.2	234.4	219.9	206.9
145°	302.9	302.2	299.0	290.8	281.0	269.6	257.1	244.2	231.6	219.1	207.3
147.5°	286.5	286.1	283.0	277.1	269.2	261.0	250.4	239.8	228.9	217.9	207.3
150°	272.4	272.4	270.0	265.7	259.8	252.4	244.2	235.1	226.1	216.3	207.3
152.5°	260.6	260.6	259.4	255.5	251.2	245.3	238.3	230.8	223.0	214.4	206.1
155°	251.2	250.8	250.0	246.9	243.4	238.7	232.8	226.5	219.9	212.0	205.4
157.5°	242.2	242.2	241.4	239.1	235.9	232.0	227.3	221.8	216.3	210.1	204.2
160°	233.6	234.0	234.0	231.6	228.9	226.1	222.2	217.9	212.8	207.7	203.4
162.5°	225.7	226.1	226.1	224.2	222.6	220.2	216.7	213.2	209.3	205.4	201.8
165°	219.1	219.1	219.5	217.9	216.3	214.4	211.6	209.3	206.1	203.0	200.3
167.5°	212.4	212.4	212.8	211.6	210.8	209.3	207.7	205.7	203.0	200.7	198.7
170°	206.5	206.5	206.9	206.1	205.7	205.0	203.4	202.2	200.3	198.3	197.1
172.5°	201.0	201.4	202.2	201.4	201.4	201.0	199.9	199.1	197.5	196.3	195.9
175°	197.1	197.5	197.9	197.5	197.5	197.5	196.7	196.3	195.6	194.8	194.8
177.5°	194.4	194.4	195.2	194.8	195.2	195.2	194.8	194.4	194.0	193.6	194.0
180°	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8
2.5°	1164.6	1161.6	1150.5	1139.4	1126.7	1114.1	1104.8	1095.4	1081.5	1067.6	1056.3
5°	1262.1	1248.0	1224.5	1201.0	1169.2	1137.3	1115.9	1094.4	1065.6	1036.8	1013.8
7.5°	1339.5	1315.2	1282.4	1249.5	1207.8	1166.1	1126.7	1087.3	1043.4	999.4	963.5
10°	1388.7	1372.3	1334.4	1296.5	1240.7	1184.8	1129.8	1074.7	1018.1	961.5	914.0
12.5°	1393.5	1395.0	1360.2	1325.3	1262.1	1199.0	1132.0	1065.1	993.9	922.6	867.3
15°	1351.3	1377.3	1358.1	1338.9	1275.3	1211.6	1129.3	1046.9	964.8	882.7	818.8
17.5°	1273.0	1328.8	1331.6	1334.4	1270.7	1207.1	1115.9	1024.7	931.7	838.7	771.5
20°	1166.1	1248.5	1276.8	1305.1	1253.3	1201.5	1103.5	1005.5	901.4	797.3	726.8
22.5°	1057.0	1157.1	1208.8	1260.6	1222.2	1183.8	1079.5	975.2	865.3	755.4	683.9
25°	932.7	1041.9	1121.4	1201.0	1177.5	1154.0	1051.2	948.4	831.4	714.4	641.4
27.5°	824.3	935.2	1031.2	1127.2	1122.2	1117.1	1015.1	913.0	793.3	673.5	603.0
30°	727.8	831.2	938.5	1045.9	1058.3	1070.7	972.1	873.6	753.6	633.6	565.6
32.5°	642.4	732.6	847.8	963.0	987.3	1011.5	922.6	833.7	714.9	596.2	530.8
35°	572.5	654.3	769.5	884.7	915.0	945.3	868.0	790.7	675.0	559.3	496.9
37.5°	510.6	579.0	691.5	803.9	841.0	878.1	808.9	739.7	631.3	522.9	465.6
40°	459.3	514.4	617.7	721.0	764.0	806.9	749.8	692.7	589.9	487.1	434.3
42.5°	416.3	465.3	559.1	652.8	694.0	735.2	686.9	638.7	547.2	455.7	407.5
45°	379.7	418.9	504.0	589.1	628.3	667.5	626.0	584.6	504.0	423.4	378.4
47.5°	345.3	378.9	451.7	524.5	559.3	594.2	561.9	529.5	461.3	393.1	352.4
50°	314.5	341.6	405.2	468.9	499.2	529.5	501.0	472.4	416.3	360.3	324.9
52.5°	287.7	309.7	363.0	416.3	442.4	468.4	443.9	419.4	374.9	330.4	299.6
55°	261.2	279.9	326.1	372.4	390.1	407.7	388.8	369.9	334.0	298.1	272.1
57.5°	236.5	253.1	291.0	328.9	342.6	356.2	339.0	321.9	294.8	267.8	246.1
60°	212.2	225.9	257.4	289.0	297.3	305.7	291.8	277.9	258.9	240.0	220.5
62.5°	189.7	202.1	225.6	249.1	254.7	260.2	249.6	239.0	224.6	210.2	195.0
65°	166.5	175.8	195.0	214.2	217.8	221.3	212.0	202.6	191.7	180.9	169.8
67.5°	145.0	151.6	167.2	182.9	183.2	183.4	175.8	168.3	162.2	156.1	147.3
70°	124.0	130.4	140.7	151.1	151.3	151.6	145.5	139.5	134.9	130.4	123.8
72.5°	102.6	107.1	114.9	122.8	122.3	121.8	118.0	114.2	110.7	107.1	102.3
75°	83.1	86.9	92.2	97.5	96.0	94.5	92.5	90.4	87.4	84.4	81.3
77.5°	65.4	67.7	70.7	73.8	72.8	71.7	70.0	68.2	65.9	63.7	62.4
80°	48.0	49.0	51.0	53.1	52.5	52.0	50.0	48.0	47.5	47.0	45.2
82.5°	32.6	33.9	34.4	34.9	34.6	34.4	32.8	31.3	30.8	30.3	30.1
85°	19.5	19.7	20.0	20.2	19.5	18.7	18.2	17.7	17.7	17.7	17.4
87.5°	8.8	9.1	9.1	9.1	8.8	8.6	8.1	7.6	7.8	8.1	8.1
90°	7.4	6.3	5.1	4.3	3.5	2.4	1.6	0.8	1.6	2.4	3.5
92.5°	60.4	39.6	27.0	20.0	16.1	12.5	8.6	5.9	8.6	12.5	16.1
95°	142.7	84.3	50.9	35.7	25.5	18.8	14.5	13.3	14.5	18.8	25.5
97.5°	158.7	90.9	58.0	41.1	31.0	25.1	21.6	21.2	21.6	25.1	31.0
100°	147.7	89.7	62.3	47.0	37.6	32.1	29.4	29.0	29.4	32.1	37.6
102.5°	138.3	91.3	67.4	53.7	45.5	40.4	38.0	37.2	38.0	40.4	45.5
105°	134.8	94.4	73.3	61.1	53.7	49.0	46.6	45.5	46.6	49.0	53.7
107.5°	134.0	99.5	80.7	69.4	62.3	57.6	55.3	54.1	55.3	57.6	62.3
110°	136.0	106.2	88.6	77.6	70.9	66.6	64.7	63.5	64.7	66.6	70.9



TEST NUMBER: P831380

CATALOG NUMBER: S123DIP-S340D365U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	139.9	112.9	96.8	86.2	79.6	75.2	73.3	72.1	73.3	75.2	79.6
115°	144.2	120.3	105.4	94.8	88.2	84.3	81.9	80.3	81.9	84.3	88.2
117.5°	149.7	128.2	113.3	103.5	96.0	92.5	90.5	88.6	90.5	92.5	96.0
120°	156.0	135.6	121.5	111.7	104.2	100.3	98.4	97.2	98.4	100.3	104.2
122.5°	161.9	143.4	129.7	119.1	112.1	107.8	105.8	104.6	105.8	107.8	112.1
125°	168.1	150.9	137.2	126.6	119.1	114.8	112.5	111.7	112.5	114.8	119.1
127.5°	173.2	157.5	144.2	133.6	125.4	121.1	118.4	117.2	118.4	121.1	125.4
130°	178.3	163.4	150.5	139.9	131.7	127.0	123.4	122.3	123.4	127.0	131.7
132.5°	183.0	168.5	156.0	145.8	137.6	131.7	127.8	126.2	127.8	131.7	137.6
135°	186.9	173.6	161.5	150.9	142.7	136.8	132.5	130.9	132.5	136.8	142.7
137.5°	190.1	177.1	165.4	155.6	147.4	141.1	136.8	135.2	136.8	141.1	147.4
140°	192.4	180.7	169.3	159.5	151.7	145.4	141.5	139.5	141.5	145.4	151.7
142.5°	194.8	183.4	172.4	163.4	155.6	150.1	145.8	144.2	145.8	150.1	155.6
145°	196.3	185.8	175.6	166.6	159.9	154.0	150.5	149.3	150.5	154.0	159.9
147.5°	197.5	187.7	178.3	170.5	163.8	158.7	155.2	154.4	155.2	158.7	163.8
150°	197.9	189.7	180.7	173.6	168.1	163.0	159.9	159.5	159.9	163.0	168.1
152.5°	198.7	190.9	183.4	176.7	172.0	167.7	164.6	164.6	164.6	167.7	172.0
155°	198.7	192.4	185.8	180.3	176.0	172.0	169.7	169.7	169.7	172.0	176.0
157.5°	199.1	193.2	187.7	183.4	179.5	176.0	174.0	173.6	174.0	176.0	179.5
160°	199.1	194.4	189.7	185.8	183.0	179.9	178.3	178.3	178.3	179.9	183.0
162.5°	198.7	194.8	190.9	187.7	185.4	183.0	181.8	181.8	181.8	183.0	185.4
165°	197.9	195.2	192.0	189.3	187.7	185.8	185.0	185.4	185.0	185.8	187.7
167.5°	197.5	195.2	192.8	190.9	189.7	188.1	187.7	188.1	187.7	188.1	189.7
170°	196.3	194.8	192.8	192.0	191.2	190.1	189.7	190.5	189.7	190.1	191.2
172.5°	195.9	194.8	193.2	192.8	192.4	191.6	191.6	192.0	191.6	191.6	192.4
175°	195.2	194.4	193.6	193.2	193.2	192.4	192.8	193.2	192.8	192.4	193.2
177.5°	194.8	194.0	193.6	193.6	193.6	193.2	193.6	194.0	193.6	193.2	193.6
180°	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6



TEST NUMBER: P831380

CATALOG NUMBER: S123DIP-S340D365U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8
2.5°	1044.9	1035.0	1025.2	1017.6	1010.0	997.1	984.3	981.2	978.2	973.9	969.6
5°	990.8	966.6	942.3	920.6	898.9	881.9	865.0	853.9	842.8	834.7	826.6
7.5°	927.7	891.3	854.9	829.1	803.4	778.9	754.4	746.5	738.7	728.1	717.5
10°	866.5	826.4	786.2	752.6	719.0	695.0	671.0	661.4	651.8	638.4	625.0
12.5°	812.0	768.0	724.0	690.2	656.3	633.1	609.9	596.0	582.1	574.5	566.9
15°	754.9	707.9	660.9	629.6	598.2	577.3	556.3	544.2	532.0	524.7	517.4
17.5°	704.3	657.9	611.4	581.3	551.2	532.0	512.8	502.2	491.6	486.1	480.5
20°	656.3	610.9	565.4	536.1	506.8	491.1	475.5	468.6	461.8	457.3	452.7
22.5°	612.4	567.7	522.9	497.9	472.9	460.3	447.7	442.9	438.1	434.3	430.5
25°	568.4	528.5	488.6	467.4	446.1	435.8	425.4	420.6	415.8	412.0	408.3
27.5°	532.5	494.4	456.3	438.1	419.9	411.8	403.7	399.9	396.1	392.6	389.1
30°	497.7	463.6	429.5	413.8	398.1	390.8	383.5	379.7	375.9	372.6	369.3
32.5°	465.3	436.0	406.7	392.3	377.9	371.9	365.8	361.3	356.7	354.2	351.7
35°	434.5	408.3	382.0	370.1	358.2	352.2	346.1	342.3	338.5	336.5	334.5
37.5°	408.3	384.8	361.3	349.9	338.5	332.7	326.9	323.6	320.3	319.6	318.8
40°	381.5	361.3	341.1	329.9	318.8	313.8	308.7	306.7	304.7	304.2	303.7
42.5°	359.2	339.5	319.8	309.7	299.6	295.3	291.0	290.0	289.0	289.8	290.5
45°	333.5	317.1	300.6	291.3	281.9	278.4	274.9	274.1	273.3	274.9	276.4
47.5°	311.7	296.6	281.4	272.6	263.7	261.2	258.7	258.4	258.2	260.2	262.2
50°	289.5	274.9	260.2	253.1	246.1	243.8	241.5	242.3	243.0	246.3	249.6
52.5°	268.8	255.2	241.5	234.9	228.4	226.9	225.3	227.1	228.9	232.4	236.0
55°	246.1	233.7	221.3	216.3	211.2	209.7	208.2	211.7	215.2	218.5	221.8
57.5°	224.3	213.5	202.6	198.1	193.5	193.3	193.0	196.3	199.6	203.1	206.7
60°	201.1	192.0	182.9	179.4	175.8	176.3	176.8	180.6	184.4	187.2	190.0
62.5°	179.9	172.3	164.7	161.4	158.1	159.4	160.7	164.5	168.3	171.5	174.8
65°	158.7	152.3	146.0	143.7	141.5	143.2	145.0	148.3	151.6	153.9	156.1
67.5°	138.4	133.1	127.8	126.1	124.3	126.1	127.8	131.1	134.4	136.7	138.9
70°	117.2	112.9	108.6	107.4	106.1	108.1	110.1	112.9	115.7	118.0	120.3
72.5°	97.5	94.2	90.9	90.7	90.4	92.2	94.0	96.8	99.5	101.1	102.6
75°	78.3	76.5	74.8	74.5	74.3	76.0	77.8	79.3	80.8	82.1	83.4
77.5°	61.1	59.6	58.1	58.4	58.6	59.9	61.1	62.7	64.2	64.9	65.7
80°	43.5	42.9	42.4	42.9	43.5	44.5	45.5	46.5	47.5	48.0	48.5
82.5°	29.8	29.3	28.8	29.6	30.3	31.1	31.8	32.6	33.3	33.6	33.9
85°	17.2	17.9	18.7	18.7	18.7	18.9	19.2	19.5	19.7	19.5	19.2
87.5°	8.1	8.3	8.6	8.6	8.6	8.8	9.1	9.1	9.1	8.8	8.6
90°	4.3	5.1	6.3	7.4	8.6	9.8	9.4	9.8	10.2	10.6	11.4
92.5°	20.0	27.0	39.6	60.4	80.7	72.9	54.5	38.8	30.2	26.3	23.5
95°	35.7	50.9	84.3	142.7	206.9	232.4	188.5	141.1	95.6	74.9	60.7
97.5°	41.1	58.0	90.9	158.7	266.9	357.4	369.6	324.1	244.5	192.8	148.1
100°	47.0	62.3	89.7	147.7	250.8	371.1	448.3	462.0	430.3	384.5	328.8
102.5°	53.7	67.4	91.3	138.3	227.3	345.7	452.3	507.9	514.6	492.6	462.4
105°	61.1	73.3	94.4	134.8	208.9	315.1	427.6	509.5	548.7	556.1	545.9
107.5°	69.4	80.7	99.5	134.0	195.6	288.0	392.3	486.0	547.5	578.1	588.6
110°	77.6	88.6	106.2	136.0	188.5	265.7	359.4	449.1	521.2	570.6	598.0



TEST NUMBER: P831380

CATALOG NUMBER: S123DIP-S340D365U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	86.2	96.8	112.9	139.9	184.6	250.8	330.8	412.7	486.7	543.6	580.8
115°	94.8	105.4	120.3	144.2	184.2	241.0	308.8	381.3	449.5	507.1	549.8
117.5°	103.5	113.3	128.2	149.7	184.6	234.4	294.3	357.0	417.4	470.3	514.6
120°	111.7	121.5	135.6	156.0	186.2	230.0	283.3	338.6	391.5	438.5	478.1
122.5°	119.1	129.7	143.4	161.9	188.9	227.3	274.3	324.1	370.7	413.5	449.5
125°	126.6	137.2	150.9	168.1	191.6	225.0	266.9	311.6	354.3	391.9	423.3
127.5°	133.6	144.2	157.5	173.2	194.8	223.8	259.8	300.2	339.0	373.5	402.5
130°	139.9	150.5	163.4	178.3	197.9	222.6	254.3	289.6	324.9	356.6	383.3
132.5°	145.8	156.0	168.5	183.0	200.3	222.2	249.2	279.8	311.6	340.6	365.6
135°	150.9	161.5	173.6	186.9	202.6	221.8	244.9	271.2	299.0	324.5	346.8
137.5°	155.6	165.4	177.1	190.1	204.2	221.0	241.0	263.0	286.5	309.2	329.2
140°	159.5	169.3	180.7	192.4	205.7	220.6	237.5	255.9	275.9	294.7	311.6
142.5°	163.4	172.4	183.4	194.8	206.9	219.9	234.4	249.2	265.7	281.4	295.5
145°	166.6	175.6	185.8	196.3	207.3	219.1	231.6	244.2	257.1	269.6	281.0
147.5°	170.5	178.3	187.7	197.5	207.3	217.9	228.9	239.8	250.4	261.0	269.2
150°	173.6	180.7	189.7	197.9	207.3	216.3	226.1	235.1	244.2	252.4	259.8
152.5°	176.7	183.4	190.9	198.7	206.1	214.4	223.0	230.8	238.3	245.3	251.2
155°	180.3	185.8	192.4	198.7	205.4	212.0	219.9	226.5	232.8	238.7	243.4
157.5°	183.4	187.7	193.2	199.1	204.2	210.1	216.3	221.8	227.3	232.0	235.9
160°	185.8	189.7	194.4	199.1	203.4	207.7	212.8	217.9	222.2	226.1	228.9
162.5°	187.7	190.9	194.8	198.7	201.8	205.4	209.3	213.2	216.7	220.2	222.6
165°	189.3	192.0	195.2	197.9	200.3	203.0	206.1	209.3	211.6	214.4	216.3
167.5°	190.9	192.8	195.2	197.5	198.7	200.7	203.0	205.7	207.7	209.3	210.8
170°	192.0	192.8	194.8	196.3	197.1	198.3	200.3	202.2	203.4	205.0	205.7
172.5°	192.8	193.2	194.8	195.9	195.9	196.3	197.5	199.1	199.9	201.0	201.4
175°	193.2	193.6	194.4	195.2	194.8	194.8	195.6	196.3	196.7	197.5	197.5
177.5°	193.6	193.6	194.0	194.8	194.0	193.6	194.0	194.4	194.8	195.2	195.2
180°	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6



TEST NUMBER: P831380

CATALOG NUMBER: S123DIP-S340D365U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1088.8	1088.8	1088.8	1088.8
2.5°	967.8	966.1	959.0	951.9
5°	820.5	814.5	812.5	810.4
7.5°	717.0	716.5	705.9	695.2
10°	625.8	626.5	616.9	607.3
12.5°	560.6	554.3	553.5	552.8
15°	511.6	505.8	504.8	503.7
17.5°	477.0	473.4	472.4	471.4
20°	450.7	448.7	446.9	445.1
22.5°	428.0	425.4	423.9	422.4
25°	406.0	403.7	403.2	402.7
27.5°	386.3	383.5	383.5	383.5
30°	367.6	365.8	365.1	364.3
32.5°	350.1	348.6	348.6	348.6
35°	333.7	333.0	332.0	330.9
37.5°	318.8	318.8	318.3	317.8
40°	304.4	305.2	305.2	305.2
42.5°	291.3	292.0	292.0	292.0
45°	277.6	278.9	279.4	279.9
47.5°	264.3	266.3	266.8	267.3
50°	251.1	252.6	252.9	253.1
52.5°	237.7	239.5	240.8	242.0
55°	223.6	225.3	226.1	226.9
57.5°	208.4	210.2	210.4	210.7
60°	191.7	193.5	194.0	194.5
62.5°	175.8	176.8	177.3	177.9
65°	157.6	159.2	160.2	161.2
67.5°	140.2	141.5	141.5	141.5
70°	120.8	121.3	122.0	122.8
72.5°	102.8	103.1	103.1	103.1
75°	83.9	84.4	84.6	84.9
77.5°	65.9	66.2	66.2	66.2
80°	48.3	48.0	48.0	48.0
82.5°	33.1	32.3	32.3	32.3
85°	18.9	18.7	18.9	19.2
87.5°	8.6	8.6	8.6	8.6
90°	11.0	11.4	11.8	11.4
92.5°	22.7	21.2	21.6	20.8
95°	53.3	49.8	47.0	45.5
97.5°	121.9	107.0	97.6	93.3
100°	289.2	260.6	245.3	245.7
102.5°	433.8	412.7	400.5	389.2
105°	527.9	513.0	500.5	498.5
107.5°	586.3	579.2	574.1	569.8
110°	609.0	612.1	611.4	610.6



TEST NUMBER: P831380

CATALOG NUMBER: S123DIP-S340D365U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	603.1	614.5	618.4	618.8
115°	579.2	596.5	604.3	606.3
117.5°	545.1	564.3	576.1	578.8
120°	509.1	531.0	540.4	542.8
122.5°	476.2	495.4	505.9	509.1
125°	448.3	465.6	475.4	478.1
127.5°	425.2	440.1	449.1	451.5
130°	404.0	418.2	426.4	429.5
132.5°	384.8	399.0	406.0	408.0
135°	366.0	377.8	384.8	387.6
137.5°	345.7	357.8	363.7	366.0
140°	326.5	337.4	343.7	343.3
142.5°	307.6	317.0	322.5	322.1
145°	290.8	299.0	302.2	302.9
147.5°	277.1	283.0	286.1	286.5
150°	265.7	270.0	272.4	272.4
152.5°	255.5	259.4	260.6	260.6
155°	246.9	250.0	250.8	251.2
157.5°	239.1	241.4	242.2	242.2
160°	231.6	234.0	234.0	233.6
162.5°	224.2	226.1	226.1	225.7
165°	217.9	219.5	219.1	219.1
167.5°	211.6	212.8	212.4	212.4
170°	206.1	206.9	206.5	206.5
172.5°	201.4	202.2	201.4	201.0
175°	197.5	197.9	197.5	197.1
177.5°	194.8	195.2	194.4	194.4
180°	193.6	193.6	193.6	193.6



TEST NUMBER: P831380

CATALOG NUMBER: S123DIP-S340D365U850-4F0-1E-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	12.54	13.40	13.46	14.34	15.55	14.78	15.64	15.70	16.58	17.78
	3H	14.19	14.96	15.12	15.91	17.14	16.20	16.97	17.14	17.92	19.15
	4H	14.76	15.50	15.71	16.45	17.69	16.65	17.38	17.60	18.33	19.57
	6H	15.13	15.81	16.10	16.76	18.02	16.93	17.60	17.89	18.56	19.81
	8H	15.23	15.87	16.20	16.84	18.10	16.99	17.63	17.96	18.60	19.85
	12H	15.28	15.89	16.25	16.85	18.13	17.01	17.62	17.98	18.58	19.86
4H	2H	13.11	13.85	14.07	14.80	16.04	14.94	15.67	15.90	16.62	17.86
	3H	14.94	15.55	15.91	16.53	17.79	16.56	17.17	17.52	18.15	19.40
	4H	15.64	16.20	16.62	17.17	18.45	17.14	17.70	18.12	18.67	19.95
	6H	16.12	16.60	17.10	17.59	18.87	17.55	18.03	18.53	19.02	20.30
	8H	16.25	16.70	17.24	17.69	18.98	17.66	18.10	18.65	19.10	20.39
	12H	16.32	16.72	17.33	17.73	19.03	17.70	18.11	18.71	19.11	20.41
8H	4H	15.91	16.35	16.90	17.35	18.64	17.25	17.69	18.24	18.69	19.98
	6H	16.50	16.87	17.51	17.90	19.19	17.75	18.12	18.76	19.15	20.44
	8H	16.71	17.03	17.73	18.05	19.36	17.93	18.25	18.95	19.28	20.58
	12H	16.83	17.11	17.85	18.13	19.48	18.03	18.32	19.06	19.33	20.69
12H	4H	15.91	16.31	16.92	17.32	18.62	17.22	17.63	18.23	18.63	19.93
	6H	16.55	16.87	17.57	17.89	19.20	17.76	18.09	18.79	19.11	20.42
	8H	16.78	17.07	17.81	18.08	19.44	17.96	18.25	18.99	19.26	20.62