

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P332003-840

Luminaire Tested: **S123DIP-S1000D365U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332003-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1000D365U840-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5706.2 lumens
Efficiency: N/A
Efficacy: 131.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

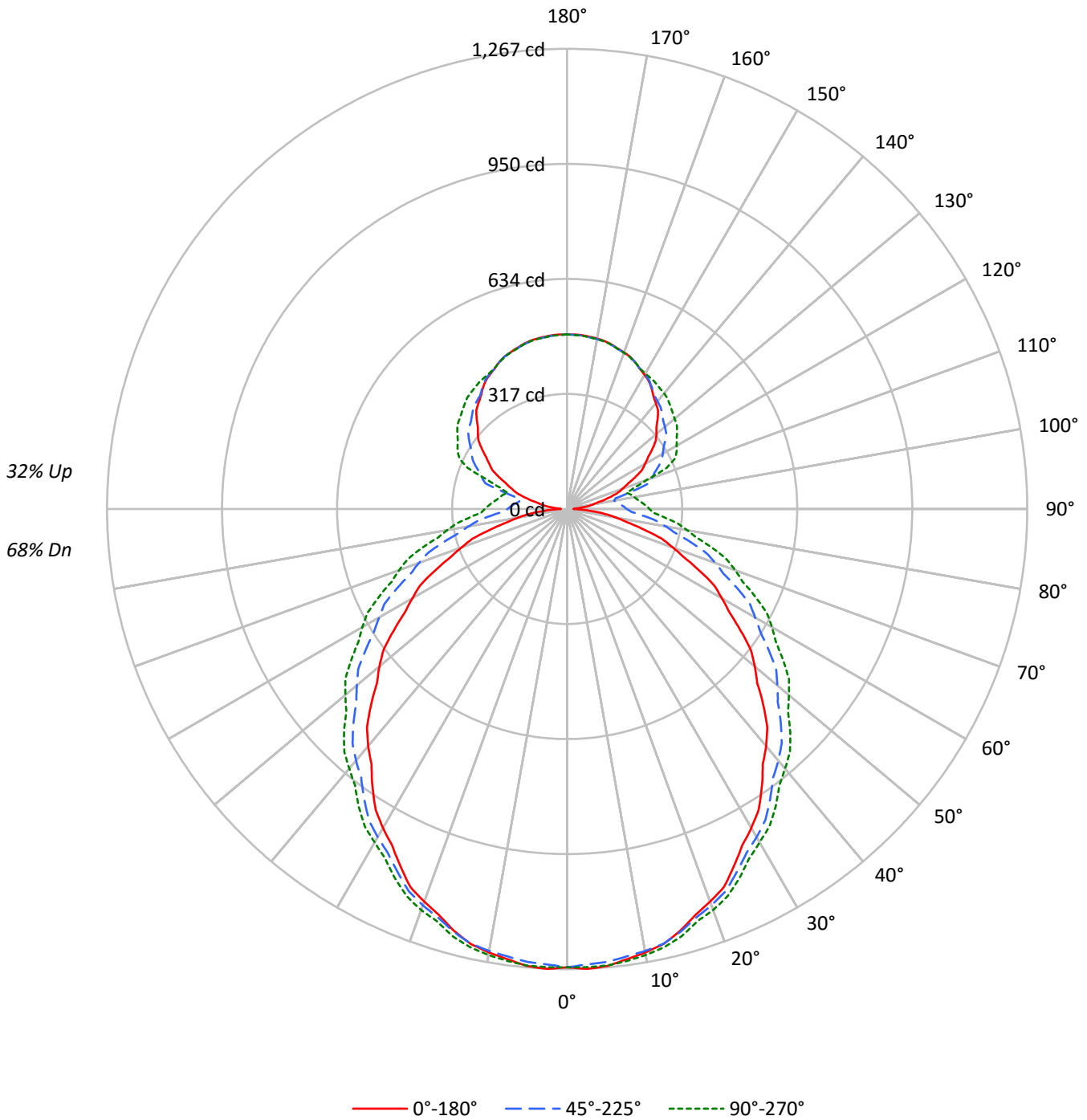
Input Watts (W): 43.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332003-840

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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	111	111	111	111	105	105	105	105	93	93	93	83	83	83	73	73	73	68				
1	100	95	91	87	94	90	86	82	80	77	74	71	68	66	62	60	59	54				
2	91	82	76	70	85	78	72	66	69	64	60	61	57	54	54	51	48	44				
3	83	72	64	57	77	68	61	55	61	55	50	54	49	45	47	44	40	37				
4	75	64	55	48	71	60	52	46	54	47	42	48	42	38	42	38	35	31				
5	69	57	48	41	65	54	46	40	48	41	36	43	37	33	38	33	30	27				
6	64	51	42	36	60	48	40	34	43	37	32	38	33	29	34	30	26	24				
7	59	46	37	31	55	44	36	30	39	33	28	35	30	25	31	27	23	21				
8	55	42	33	28	51	40	32	27	36	29	25	32	27	23	29	24	21	18				
9	51	38	30	25	48	36	29	24	33	26	22	29	24	20	26	22	19	17				
10	48	35	27	22	45	33	26	21	30	24	20	27	22	18	24	20	17	15				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13581	13581	13581
5°	13623	13239	13246
10°	13501	12935	12870
15°	13327	12588	12458
20°	13078	12192	12005
25°	12772	11738	11529
30°	12457	11328	11046
35°	12104	10895	10660
40°	11767	10501	10247
45°	11396	10122	9918
50°	11028	9750	9554
55°	10621	9366	9226
60°	10225	8977	8892
65°	9818	8564	8493
70°	9204	8097	8084
75°	8432	7563	7667
80°	7539	7041	7193
85°	6723	6680	6917



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.6	2.1
10°-20°	341.0	6.0
20°-30°	510.0	8.9
30°-40°	609.0	10.7
40°-50°	637.2	11.2
50°-60°	598.0	10.5
60°-70°	499.4	8.8
70°-80°	357.3	6.3
80°-90°	214.4	3.8
90°-100°	151.2	2.6
100°-110°	181.5	3.2
110°-120°	265.5	4.7
120°-130°	292.1	5.1
130°-140°	288.8	5.1
140°-150°	258.0	4.5
150°-160°	205.2	3.6
160°-170°	132.4	2.3
170°-180°	45.6	0.8
0°-30°	970.6	17.0
0°-40°	1579.6	27.7
0°-60°	2814.7	49.3
0°-90°	3885.9	68.1
90°-120°	598.2	10.5
90°-150°	1437.0	25.2
90°-180°	1820.0	31.9
0°-180°	5706.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1262	1262	1262	1262	1262	
5°	1263	1260	1252	1262	1262	120
15°	1203	1206	1205	1218	1218	339
25°	1086	1099	1104	1121	1122	500
35°	935	956	974	994	1001	584
45°	764	797	832	857	869	589
55°	583	628	678	713	726	522
65°	403	457	517	556	572	398
75°	218	283	352	396	414	233
85°	67	136	209	254	269	71
90°	18	89	164	210	226	13
95°	37	78	147	190	206	39
105°	117	154	181	159	170	124
115°	206	227	278	313	327	204
125°	285	290	329	358	369	255
135°	353	355	370	395	402	272
145°	405	406	407	419	424	253
155°	445	444	445	446	444	205
165°	469	468	468	470	468	133
175°	480	479	479	481	479	46
180°	480	480	480	480	480	



TEST NUMBER: P332003-840

CATALOG NUMBER: S123DIP-S1000D365U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7
2.5°	1267.3	1266.6	1265.8	1265.1	1264.4	1262.9	1261.0	1259.1	1257.1	1255.2	1257.1
5°	1263.1	1262.5	1261.9	1261.3	1260.7	1259.5	1257.7	1255.8	1253.9	1252.1	1254.6
7.5°	1250.7	1250.9	1251.0	1251.1	1251.2	1250.4	1248.7	1246.9	1245.1	1243.3	1246.4
10°	1239.8	1240.4	1241.0	1241.6	1242.2	1241.7	1240.2	1238.7	1237.2	1235.7	1238.7
12.5°	1226.6	1227.4	1228.3	1229.1	1230.0	1229.9	1228.9	1227.8	1226.8	1225.8	1228.6
15°	1202.6	1203.6	1204.5	1205.4	1206.3	1206.6	1206.3	1206.0	1205.7	1205.4	1208.5
17.5°	1172.5	1174.3	1176.1	1177.9	1179.7	1180.6	1180.5	1180.3	1180.2	1180.1	1182.9
20°	1150.4	1152.3	1154.1	1155.9	1157.7	1159.0	1159.6	1160.2	1160.8	1161.4	1164.2
22.5°	1127.3	1129.1	1131.0	1132.9	1134.7	1136.0	1136.9	1137.7	1138.6	1139.4	1142.9
25°	1085.8	1088.8	1092.0	1095.0	1098.0	1100.0	1101.0	1101.9	1102.8	1103.7	1107.6
27.5°	1044.0	1047.5	1051.0	1054.5	1057.9	1060.7	1062.7	1064.6	1066.5	1068.5	1072.0
30°	1014.3	1018.3	1022.3	1026.2	1030.3	1033.4	1035.9	1038.3	1040.8	1043.2	1046.9
32.5°	981.4	985.8	990.3	994.7	999.2	1003.0	1006.2	1009.4	1012.6	1015.7	1019.7
35°	934.6	939.5	944.4	949.3	954.2	958.6	962.6	966.5	970.5	974.5	979.1
37.5°	885.1	890.7	896.2	901.6	907.2	912.3	917.3	922.1	927.0	931.9	937.1
40°	852.1	857.7	863.1	868.7	874.1	880.0	886.1	892.2	898.3	904.4	909.6
42.5°	815.9	822.6	829.3	836.1	842.7	849.3	855.7	862.0	868.4	874.7	880.4
45°	764.2	771.5	778.9	786.2	793.6	801.0	808.6	816.3	823.9	831.5	837.4
47.5°	710.0	718.3	726.7	735.0	743.3	751.8	760.5	769.3	778.0	786.8	793.2
50°	674.9	683.4	692.0	700.5	709.0	718.1	727.5	737.0	746.5	756.0	763.0
52.5°	637.4	646.5	655.6	664.6	673.7	683.4	693.9	704.3	714.7	725.2	732.5
55°	582.8	592.9	602.9	613.0	623.1	633.6	644.6	655.6	666.6	677.6	685.9
57.5°	529.5	540.0	550.5	561.0	571.5	582.8	594.8	606.8	618.8	630.9	639.1
60°	492.1	503.0	514.0	525.0	536.0	547.8	560.3	572.9	585.4	597.9	606.4
62.5°	456.9	468.1	479.4	490.6	501.8	514.1	527.4	540.6	553.8	567.1	575.6
65°	402.7	414.7	426.6	438.5	450.4	463.0	476.5	489.9	503.3	516.8	525.9
67.5°	347.7	360.4	373.0	385.7	398.3	411.5	425.2	438.9	452.5	466.3	476.3
70°	309.2	322.3	335.5	348.7	361.8	375.7	390.3	405.1	419.7	434.3	444.1
72.5°	274.1	287.2	300.3	313.5	326.6	340.7	355.9	371.0	386.2	401.3	411.3
75°	218.5	232.9	247.2	261.7	276.0	290.7	306.1	321.3	336.6	351.8	361.9
77.5°	170.2	184.6	199.1	213.6	228.0	243.0	258.4	273.8	289.2	304.6	315.2
80°	136.0	151.1	166.0	181.0	195.9	211.4	227.2	243.2	259.0	274.9	285.3
82.5°	106.3	121.6	136.8	152.0	167.2	182.9	199.0	215.1	231.3	247.4	257.8
85°	67.4	82.6	97.9	113.2	128.5	144.2	160.4	176.5	192.7	208.9	219.3
87.5°	36.7	52.0	67.4	82.7	98.2	113.7	129.5	145.2	161.1	176.8	187.2
90°	18.2	34.0	49.8	65.5	81.3	97.5	114.0	130.7	147.2	163.9	174.6
92.5°	23.4	36.7	50.0	63.2	76.5	91.2	107.3	123.4	139.6	155.6	166.3
95°	36.9	45.5	54.2	62.9	71.5	83.8	99.6	115.4	131.3	147.1	157.1
97.5°	57.3	66.6	75.8	85.1	94.4	103.3	111.9	120.5	129.1	137.6	147.4
100°	72.7	84.0	95.4	106.7	118.2	124.6	126.3	127.9	129.7	131.4	140.9
102.5°	90.4	100.4	110.3	120.3	130.2	135.3	135.6	135.8	136.1	136.4	143.1
105°	117.3	125.5	133.7	142.0	150.2	157.2	163.3	169.3	175.2	181.3	175.7
107.5°	144.4	151.3	158.2	165.2	172.1	182.4	195.9	209.5	223.1	236.7	234.6
110°	162.4	168.5	174.7	180.8	186.9	196.5	209.6	222.8	235.8	248.9	254.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	180.7	185.8	190.9	195.9	201.1	209.8	222.5	235.1	247.7	260.3	268.0
115°	206.3	210.5	214.6	218.7	222.9	230.9	242.6	254.3	266.0	277.7	285.8
117.5°	232.3	235.1	237.9	240.9	243.7	250.4	261.2	271.9	282.5	293.2	301.0
120°	247.4	249.6	252.0	254.2	256.4	262.7	273.0	283.4	293.7	304.0	311.6
122.5°	264.0	265.4	266.8	268.1	269.5	275.2	285.1	295.0	304.9	314.8	321.9
125°	285.3	286.0	286.6	287.2	287.9	292.8	301.9	311.1	320.3	329.4	336.1
127.5°	307.3	307.6	308.0	308.3	308.6	312.7	320.3	328.1	335.8	343.5	349.8
130°	321.0	321.3	321.6	322.0	322.3	325.7	332.1	338.5	345.0	351.4	357.5
132.5°	333.1	333.7	334.2	334.8	335.4	338.2	343.4	348.5	353.7	358.8	364.7
135°	352.8	352.9	353.1	353.4	353.6	355.5	359.1	362.7	366.5	370.1	375.9
137.5°	369.7	370.0	370.4	370.7	371.1	372.3	374.4	376.5	378.5	380.6	385.8
140°	380.0	380.5	380.9	381.4	381.9	382.7	383.8	385.1	386.2	387.3	392.2
142.5°	390.5	390.8	391.0	391.2	391.5	391.8	392.2	392.6	393.0	393.5	397.9
145°	405.4	405.6	405.9	406.1	406.4	406.6	406.7	406.9	407.0	407.2	409.8
147.5°	417.9	418.3	418.6	419.0	419.3	419.6	419.8	419.9	420.1	420.2	421.1
150°	426.5	426.7	426.9	427.2	427.4	427.6	427.8	427.9	428.1	428.2	428.4
152.5°	434.1	434.2	434.3	434.4	434.5	434.7	434.7	434.8	434.9	435.0	435.4
155°	445.0	444.8	444.6	444.5	444.3	444.3	444.4	444.4	444.5	444.6	445.0
157.5°	453.4	453.4	453.4	453.3	453.3	453.3	453.2	453.1	453.0	453.0	453.4
160°	458.6	458.5	458.4	458.3	458.3	458.2	458.1	458.0	458.0	457.9	458.3
162.5°	463.4	463.2	463.0	462.8	462.6	462.4	462.3	462.3	462.2	462.1	462.6
165°	469.3	469.0	468.8	468.6	468.3	468.2	468.1	468.0	467.9	467.9	468.5
167.5°	473.8	473.5	473.2	472.9	472.5	472.4	472.4	472.4	472.4	472.4	473.0
170°	476.4	476.1	475.7	475.4	475.1	474.9	474.9	474.9	474.9	474.9	475.6
172.5°	478.1	477.8	477.4	477.0	476.6	476.5	476.5	476.6	476.7	476.7	477.4
175°	480.3	479.9	479.5	479.2	478.8	478.6	478.7	478.8	478.8	478.9	479.5
177.5°	480.9	480.6	480.3	480.0	479.6	479.5	479.6	479.6	479.7	479.8	480.3
180°	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7
2.5°	1259.1	1261.0	1262.9	1263.8	1263.5	1263.3	1263.1	1262.8
5°	1257.0	1259.5	1261.9	1262.9	1262.6	1262.3	1262.0	1261.7
7.5°	1249.4	1252.5	1255.6	1256.9	1256.6	1256.2	1255.8	1255.5
10°	1241.7	1244.8	1247.9	1249.1	1248.5	1247.9	1247.3	1246.7
12.5°	1231.3	1234.2	1237.0	1238.1	1237.5	1236.9	1236.3	1235.7
15°	1211.5	1214.6	1217.6	1219.0	1218.7	1218.4	1218.1	1217.8
17.5°	1185.6	1188.4	1191.1	1192.2	1191.8	1191.4	1191.0	1190.5
20°	1166.9	1169.6	1172.5	1174.0	1174.3	1174.6	1174.9	1175.2
22.5°	1146.4	1149.8	1153.4	1155.0	1154.8	1154.7	1154.5	1154.3
25°	1111.7	1115.6	1119.5	1121.6	1121.6	1121.6	1121.6	1121.6
27.5°	1075.3	1078.7	1082.2	1084.0	1084.3	1084.5	1084.8	1085.0
30°	1050.6	1054.2	1057.8	1059.8	1059.8	1059.8	1059.8	1059.8
32.5°	1023.6	1027.4	1031.4	1033.7	1034.4	1035.1	1035.9	1036.6
35°	983.6	988.3	992.8	995.7	996.9	998.2	999.4	1000.6
37.5°	942.3	947.5	952.7	955.7	956.7	957.7	958.7	959.7
40°	914.7	920.0	925.1	928.4	929.6	930.8	932.0	933.2
42.5°	886.1	891.7	897.5	901.1	902.8	904.5	906.3	908.0
45°	843.1	849.0	854.7	858.9	861.3	863.7	866.3	868.7
47.5°	799.8	806.4	812.8	817.1	819.0	820.9	822.7	824.7
50°	770.0	777.0	784.1	788.6	790.8	792.9	795.1	797.2
52.5°	739.7	747.0	754.3	759.2	761.8	764.5	767.1	769.7
55°	694.1	702.4	710.6	715.9	718.4	720.8	723.3	725.7
57.5°	647.5	655.8	664.1	669.7	672.6	675.4	678.3	681.2
60°	615.0	623.6	632.1	638.0	641.5	644.8	648.1	651.5
62.5°	584.2	592.8	601.3	607.1	610.3	613.4	616.5	619.7
65°	535.1	544.3	553.4	559.6	562.6	565.6	568.8	571.8
67.5°	486.3	496.2	506.2	512.6	515.1	517.8	520.3	522.8
70°	453.8	463.6	473.4	479.9	482.9	485.9	489.0	492.1
72.5°	421.4	431.4	441.4	448.0	451.0	454.0	457.2	460.2
75°	372.0	382.1	392.1	399.1	402.7	406.4	410.0	413.7
77.5°	325.9	336.5	347.1	353.9	356.6	359.4	362.2	365.1
80°	295.7	306.1	316.4	323.2	326.2	329.2	332.3	335.4
82.5°	268.2	278.5	288.9	295.7	298.7	301.7	304.8	307.9
85°	229.6	240.0	250.4	257.2	260.2	263.3	266.3	269.4
87.5°	197.7	208.1	218.6	225.4	228.4	231.6	234.6	237.7
90°	185.3	196.0	206.7	213.7	216.8	220.0	223.3	226.5
92.5°	176.9	187.6	198.2	205.0	207.9	210.9	213.7	216.6
95°	167.1	177.2	187.2	193.8	196.8	199.9	202.9	206.0
97.5°	157.1	166.8	176.6	183.1	186.2	189.3	192.5	195.6
100°	150.4	159.9	169.4	175.6	178.7	181.9	185.0	188.1
102.5°	149.8	156.4	163.1	167.9	171.2	174.4	177.5	180.8
105°	170.3	164.8	159.3	158.0	160.9	163.8	166.7	169.7
107.5°	232.5	230.4	228.2	223.3	215.4	207.5	199.7	191.7
110°	259.5	264.9	270.2	268.4	259.5	250.6	241.8	232.9



TEST NUMBER: P332003-840

CATALOG NUMBER: S123DIP-S1000D365U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	275.8	283.6	291.2	295.3	295.6	295.9	296.2	296.5
115°	294.0	302.1	310.1	315.6	318.4	321.1	323.9	326.7
117.5°	309.0	316.9	324.8	329.9	332.4	334.9	337.3	339.7
120°	319.3	326.9	334.6	339.5	341.6	343.8	345.9	348.0
122.5°	329.2	336.4	343.7	348.3	350.5	352.7	355.0	357.2
125°	342.6	349.2	355.8	360.2	362.4	364.8	367.1	369.4
127.5°	356.1	362.4	368.7	372.8	374.8	376.7	378.6	380.5
130°	363.7	369.8	375.9	379.8	381.4	383.1	384.9	386.5
132.5°	370.5	376.4	382.2	386.2	388.0	389.8	391.7	393.5
135°	381.6	387.4	393.0	396.6	397.9	399.2	400.4	401.7
137.5°	391.0	396.2	401.4	404.8	406.1	407.5	408.8	410.2
140°	397.2	402.0	407.0	410.1	411.4	412.8	414.1	415.6
142.5°	402.2	406.6	410.9	413.7	415.1	416.4	417.6	418.9
145°	412.3	415.0	417.6	419.5	420.7	421.9	423.1	424.3
147.5°	422.0	422.9	423.8	424.6	425.4	426.1	426.8	427.6
150°	428.6	428.7	428.9	429.1	429.5	429.9	430.2	430.6
152.5°	435.7	436.0	436.3	436.3	436.0	435.8	435.6	435.3
155°	445.5	445.9	446.3	446.2	445.8	445.2	444.7	444.2
157.5°	453.9	454.4	454.9	454.8	454.2	453.6	452.9	452.3
160°	458.8	459.3	459.8	459.7	459.2	458.6	458.1	457.5
162.5°	463.2	463.7	464.2	464.3	463.8	463.3	462.8	462.3
165°	469.1	469.8	470.4	470.4	469.9	469.3	468.8	468.2
167.5°	473.6	474.3	474.9	474.9	474.3	473.6	473.0	472.4
170°	476.3	476.9	477.5	477.5	476.9	476.3	475.6	474.9
172.5°	478.0	478.6	479.2	479.2	478.5	477.8	477.1	476.4
175°	480.0	480.6	481.1	481.1	480.5	479.8	479.2	478.6
177.5°	480.8	481.3	481.8	481.7	481.1	480.5	479.8	479.2
180°	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3

(END OF REPORT)