

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: P332013-840

Luminaire Tested: **S123DIP-S1000D585U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332013-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S1000D585U840-4F0-1E-UDD-D1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6273.9 lumens  
Efficiency: N/A  
Efficacy: 128.6 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

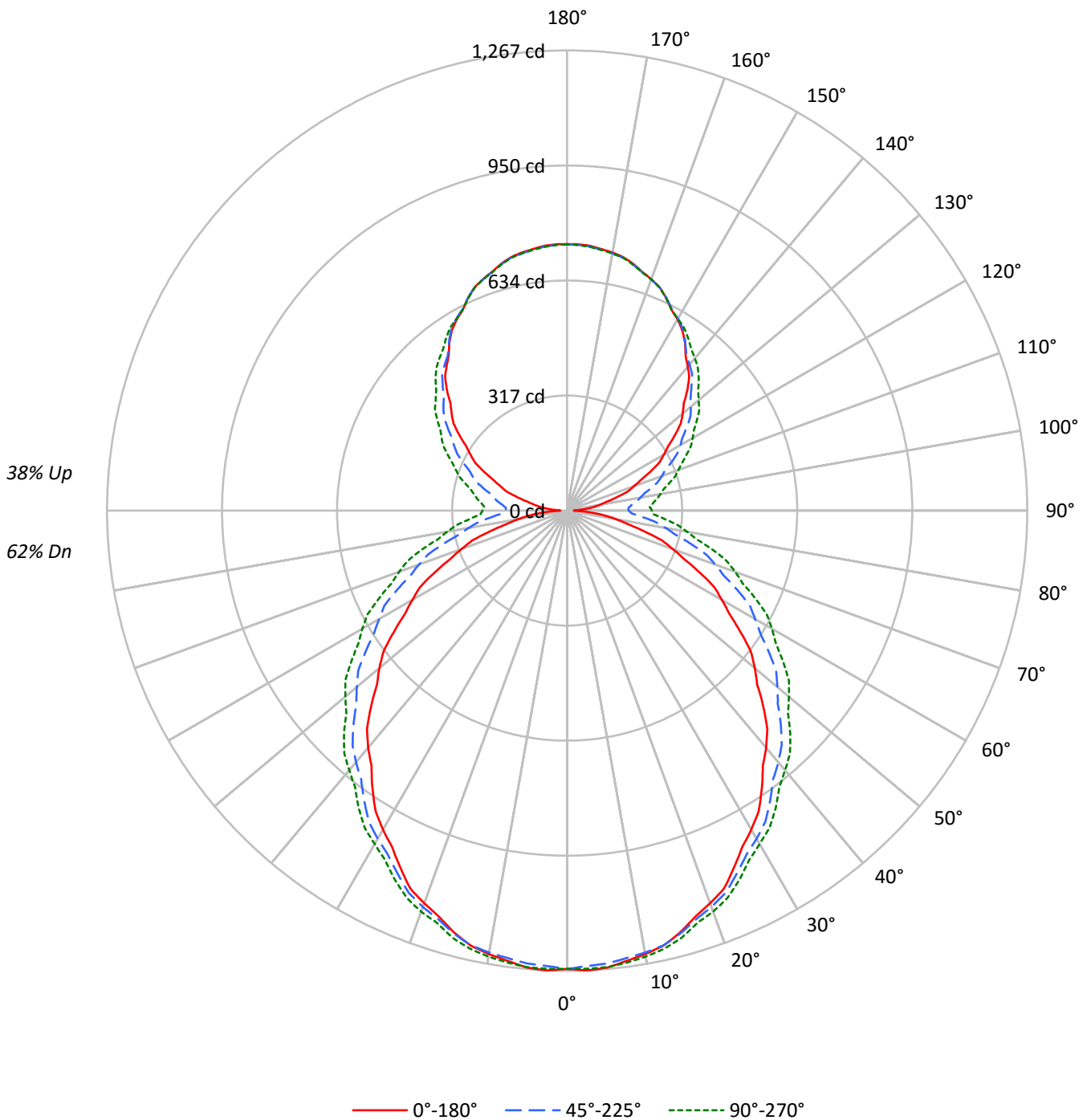
Input Watts (W): 48.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	62																												
1	99	94	90	86	93	88	84	81	77	74	71	67	64	62	57	56	54	49																												
2	90	82	75	69	84	76	70	65	67	62	58	58	54	51	50	47	45	40																												
3	82	71	63	57	76	67	60	54	58	53	48	51	46	43	44	40	37	34																												
4	75	63	54	48	69	59	51	45	52	46	41	45	40	36	39	35	32	29																												
5	68	56	47	41	64	53	45	39	46	40	35	40	35	31	35	31	28	25																												
6	63	50	42	35	59	47	39	34	42	35	30	36	31	27	31	27	24	21																												
7	58	45	37	31	54	43	35	30	38	31	27	33	28	24	29	25	21	19																												
8	54	41	33	27	50	39	31	26	34	28	24	30	25	21	26	22	19	17																												
9	50	38	30	24	47	35	28	23	32	25	21	28	23	19	24	20	17	15																												
10	47	34	27	22	44	33	26	21	29	23	19	26	21	17	23	19	16	14																												

**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	1.9
10°-20°	341.0	5.4
20°-30°	510.0	8.1
30°-40°	609.0	9.7
40°-50°	637.2	10.2
50°-60°	598.0	9.5
60°-70°	499.4	8.0
70°-80°	357.3	5.7
80°-90°	215.2	3.4
90°-100°	181.5	2.9
100°-110°	241.2	3.8
110°-120°	308.8	4.9
120°-130°	357.4	5.7
130°-140°	376.4	6.0
140°-150°	357.0	5.7
150°-160°	297.5	4.7
160°-170°	198.0	3.2
170°-180°	69.3	1.1
0°-30°	970.6	15.5
0°-40°	1579.6	25.2
0°-60°	2814.7	44.9
0°-90°	3886.7	62.0
90°-120°	731.5	11.7
90°-150°	1822.2	29.0
90°-180°	2387.0	38.0
0°-180°	6273.9	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	92	169	216	233	14
95°	49	108	179	222	237	50
105°	141	176	239	276	291	150
115°	252	272	318	350	362	249
125°	362	366	403	428	437	324
135°	468	470	484	506	512	360
145°	565	565	567	577	580	353
155°	646	646	646	648	645	297
165°	703	702	702	705	701	198
175°	732	729	729	732	729	69
180°	733	733	733	733	733	



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**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	52.1	67.6	83.1	98.6	114.2	130.2	146.0	162.0	177.8	188.3
90°	18.5	34.7	50.9	67.2	83.4	100.2	117.4	134.6	151.9	169.2	180.1
92.5°	30.7	45.0	59.5	73.8	88.2	103.5	119.8	136.0	152.4	168.6	179.2
95°	49.1	61.9	74.7	87.6	100.4	114.7	130.7	146.7	162.7	178.7	188.6
97.5°	73.8	85.2	96.6	108.1	119.5	132.7	147.7	162.8	177.8	192.9	202.6
100°	90.7	101.3	111.8	122.3	132.9	145.5	160.2	174.9	189.6	204.3	213.5
102.5°	110.4	119.6	128.9	138.1	147.3	159.4	174.0	188.6	203.3	217.9	226.9
105°	140.6	148.1	155.8	163.4	171.0	181.9	196.2	210.5	224.7	239.0	247.6
107.5°	174.4	180.9	187.2	193.6	200.0	209.6	222.6	235.5	248.4	261.4	269.9
110°	195.4	201.2	206.9	212.7	218.4	227.6	240.0	252.6	265.0	277.5	285.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	218.5	223.2	227.8	232.5	237.2	245.4	257.2	268.9	280.7	292.6	300.8
115°	251.7	255.7	259.7	263.9	267.9	275.3	286.0	296.8	307.5	318.2	325.7
117.5°	286.2	288.7	291.2	293.8	296.3	302.6	312.6	322.4	332.4	342.4	349.7
120°	306.8	309.0	311.3	313.7	315.9	321.8	331.2	340.7	350.1	359.5	366.5
122.5°	329.3	330.7	332.0	333.5	334.8	340.0	349.3	358.6	367.9	377.1	383.5
125°	362.4	362.7	363.1	363.6	364.0	368.4	377.1	385.7	394.3	402.8	408.8
127.5°	394.3	394.8	395.3	395.8	396.3	400.0	407.1	414.1	421.2	428.3	433.5
130°	415.4	416.2	416.9	417.6	418.3	421.5	427.2	432.9	438.7	444.4	449.7
132.5°	435.5	436.5	437.5	438.4	439.4	442.1	446.8	451.3	456.0	460.6	465.5
135°	467.6	468.1	468.5	469.0	469.5	471.3	474.5	477.8	481.0	484.2	489.2
137.5°	497.3	497.7	498.1	498.5	498.9	500.2	502.4	504.6	506.9	509.1	513.3
140°	516.9	517.6	518.2	518.9	519.5	520.3	521.4	522.4	523.4	524.5	529.0
142.5°	535.8	536.2	536.6	536.9	537.3	537.8	538.2	538.7	539.1	539.5	543.4
145°	565.3	565.2	565.2	565.1	565.1	565.2	565.6	566.0	566.4	566.8	569.2
147.5°	589.8	590.2	590.7	591.1	591.6	592.0	592.4	592.7	593.1	593.4	594.1
150°	607.7	607.9	608.2	608.4	608.7	608.9	609.3	609.5	609.8	610.0	610.0
152.5°	622.5	622.8	623.2	623.5	623.9	624.1	624.3	624.4	624.6	624.7	624.9
155°	645.7	645.7	645.7	645.7	645.7	645.8	645.9	646.0	646.2	646.3	646.8
157.5°	665.5	665.4	665.2	665.1	664.9	664.9	665.0	665.1	665.2	665.3	665.8
160°	677.9	677.7	677.4	677.2	676.9	676.8	676.8	676.8	676.8	676.8	677.4
162.5°	689.0	688.6	688.3	687.9	687.6	687.5	687.6	687.7	687.8	687.9	688.5
165°	703.3	703.0	702.6	702.2	701.8	701.6	701.6	701.6	701.6	701.6	702.4
167.5°	714.7	714.2	713.7	713.2	712.7	712.5	712.6	712.7	712.8	712.9	713.7
170°	721.1	720.6	720.1	719.6	719.1	718.8	718.8	718.8	718.8	718.8	719.7
172.5°	726.2	725.7	725.2	724.7	724.2	724.0	724.0	724.0	724.0	724.0	724.8
175°	731.5	731.0	730.5	730.0	729.5	729.2	729.2	729.2	729.2	729.2	730.0
177.5°	733.8	733.4	733.0	732.5	732.1	731.8	731.8	731.8	731.8	731.8	732.5
180°	733.3	733.3	733.3	733.3	733.3	733.3	733.3	733.3	733.3	733.3	733.3



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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°	198.8	209.3	219.8	226.6	229.7	232.9	235.9	239.0
90°	191.0	201.9	212.7	219.8	223.2	226.4	229.7	233.1
92.5°	189.8	200.3	210.9	217.4	220.0	222.8	225.4	228.0
95°	198.6	208.6	218.6	225.1	228.2	231.3	234.3	237.3
97.5°	212.3	222.0	231.7	238.0	241.0	244.0	247.0	250.0
100°	222.8	232.0	241.3	247.5	250.9	254.1	257.4	260.7
102.5°	235.9	244.9	253.9	259.9	263.0	265.9	268.9	272.0
105°	256.1	264.7	273.3	279.0	282.1	285.0	288.0	291.0
107.5°	278.5	287.1	295.7	301.2	303.8	306.3	308.8	311.4
110°	294.4	302.9	311.2	316.6	318.8	320.9	323.2	325.4





TEST NUMBER: P332013-840

CATALOG NUMBER: S123DIP-S1000D585U840-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	309.1	317.5	325.8	331.2	333.9	336.5	339.2	341.8
115°	333.2	340.6	348.1	352.9	355.3	357.6	359.9	362.2
117.5°	357.0	364.3	371.4	376.1	378.1	380.1	382.1	384.2
120°	373.3	380.2	387.2	391.5	393.4	395.3	397.2	399.1
122.5°	390.0	396.5	402.9	407.0	408.8	410.6	412.3	414.1
125°	414.7	420.5	426.5	430.2	431.8	433.4	435.0	436.8
127.5°	438.9	444.2	449.6	452.9	454.4	456.0	457.5	458.9
130°	454.9	460.3	465.5	468.7	469.6	470.6	471.5	472.4
132.5°	470.4	475.3	480.3	483.5	484.8	486.3	487.7	489.1
135°	494.2	499.2	504.1	507.3	508.6	509.9	511.1	512.4
137.5°	517.7	521.9	526.2	528.9	530.0	531.0	532.0	533.0
140°	533.4	537.9	542.3	544.8	545.4	546.1	546.7	547.3
142.5°	547.3	551.4	555.3	557.7	558.6	559.4	560.2	561.1
145°	571.5	573.7	576.0	577.5	578.2	579.0	579.7	580.4
147.5°	594.9	595.6	596.3	596.8	597.2	597.5	597.8	598.2
150°	610.0	610.0	610.0	610.0	609.8	609.7	609.5	609.3
152.5°	625.2	625.4	625.6	625.4	624.9	624.3	623.8	623.2
155°	647.3	647.8	648.3	648.1	647.2	646.3	645.5	644.6
157.5°	666.4	666.9	667.4	667.3	666.6	665.9	665.2	664.5
160°	678.1	678.7	679.3	679.4	678.9	678.4	677.9	677.4
162.5°	689.1	689.8	690.4	690.3	689.5	688.7	687.9	687.1
165°	703.2	703.9	704.7	704.6	703.7	702.8	702.0	701.0
167.5°	714.5	715.3	716.1	716.1	715.3	714.5	713.7	712.9
170°	720.6	721.5	722.5	722.5	721.5	720.6	719.7	718.8
172.5°	725.5	726.3	727.1	727.1	726.2	725.3	724.4	723.5
175°	730.7	731.5	732.4	732.3	731.3	730.4	729.5	728.6
177.5°	733.2	733.8	734.4	734.3	733.6	732.9	732.2	731.4
180°	733.3	733.3	733.3	733.3	733.3	733.3	733.3	733.3

(END OF REPORT)