

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: P332023-840

Luminaire Tested: **S123DIP-S1000D805U840-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332023-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1000D805U840-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7177.5 lumens
Efficiency: N/A
Efficacy: 131.9 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: General Diffuse

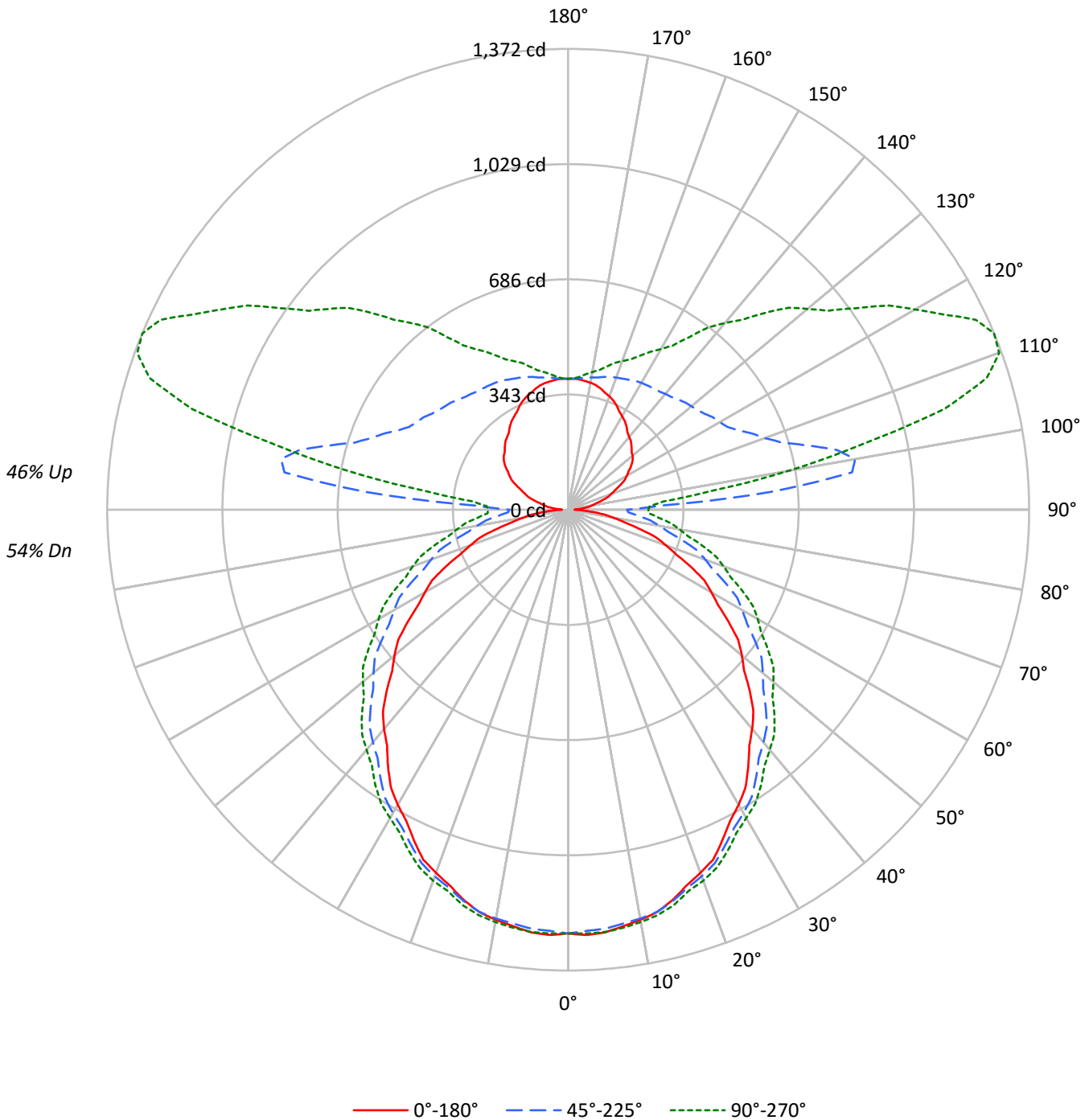
Input Watts (W): 54.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	108	108	108	108	100	100	100	100	86	86	86	72	72	72	60	60	60	54
1	98	93	88	84	90	86	82	79	73	71	68	62	60	58	51	50	48	43
2	88	80	74	68	82	75	69	64	64	59	55	54	50	47	44	42	40	35
3	80	70	62	56	74	65	58	53	56	50	46	47	43	40	39	36	33	29
4	73	62	54	47	68	58	50	44	49	44	39	42	37	34	35	31	29	25
5	67	55	47	40	62	51	44	38	44	38	33	37	33	29	31	28	25	21
6	62	49	41	35	57	46	38	33	40	34	29	34	29	25	28	24	22	19
7	57	44	36	30	53	41	34	29	36	30	25	31	26	22	26	22	19	16
8	53	40	32	27	49	38	30	25	33	27	23	28	23	20	24	20	17	15
9	49	37	29	24	46	34	27	23	30	24	20	26	21	18	22	18	15	13
10	46	34	26	21	43	32	25	20	28	22	18	24	19	16	20	17	14	12

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	1.7
10°-20°	341.0	4.8
20°-30°	510.0	7.1
30°-40°	609.0	8.5
40°-50°	637.2	8.9
50°-60°	598.0	8.3
60°-70°	499.4	7.0
70°-80°	357.3	5.0
80°-90°	216.1	3.0
90°-100°	350.7	4.9
100°-110°	712.9	9.9
110°-120°	670.2	9.3
120°-130°	519.8	7.2
130°-140°	397.1	5.5
140°-150°	287.4	4.0
150°-160°	197.8	2.8
160°-170°	116.2	1.6
170°-180°	37.8	0.5
0°-30°	970.6	13.5
0°-40°	1579.6	22.0
0°-60°	2814.7	39.2
0°-90°	3887.6	54.2
90°-120°	1733.8	24.2
90°-150°	2938.0	40.9
90°-180°	3290.0	45.8
0°-180°	7177.5	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°	20	95	175	222	239	14
95°	42	157	604	314	284	41
105°	103	181	738	1250	1158	108
115°	169	227	558	1169	1338	167
125°	229	272	497	893	1046	204
135°	266	317	463	716	829	206
145°	302	345	441	565	627	189
155°	342	369	427	486	506	157
165°	373	384	409	434	441	105
175°	389	390	392	398	397	37
180°	390	390	390	390	390	



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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°	36.9	52.4	68.0	83.6	99.2	114.8	130.9	146.9	163.0	179.0	189.2
90°	19.5	36.0	52.5	69.9	86.4	103.3	121.2	139.2	157.1	175.0	184.6
92.5°	26.6	44.8	64.9	84.6	104.7	130.8	166.8	216.1	264.8	267.9	248.2
95°	42.0	56.2	76.9	102.2	134.6	178.8	260.9	393.5	538.0	604.3	525.3
97.5°	59.3	70.8	88.4	110.8	141.8	187.6	266.0	412.9	643.1	851.7	911.5
100°	70.8	81.4	96.6	117.4	146.2	188.9	258.2	389.1	610.9	867.3	1031.7
102.5°	82.9	93.2	106.8	126.1	152.0	191.5	254.9	367.9	566.5	819.6	1031.2
105°	102.6	112.3	124.3	141.2	163.5	198.2	254.0	348.4	510.8	737.9	973.0
107.5°	122.1	130.7	141.5	157.0	177.3	209.4	259.3	339.3	472.1	664.8	878.7
110°	136.1	144.0	153.5	167.6	186.5	217.5	265.3	337.5	455.6	623.3	819.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	150.1	156.9	165.4	178.6	196.5	226.1	270.8	338.2	443.1	592.7	767.0
115°	168.7	175.5	184.0	195.5	212.6	241.3	282.3	341.4	432.9	558.5	702.4
117.5°	188.5	194.4	200.6	210.2	227.4	253.4	293.5	346.7	425.4	533.6	659.0
120°	201.3	205.2	210.7	220.0	236.6	262.2	300.6	351.8	422.6	521.2	635.6
122.5°	213.3	216.5	221.2	230.6	245.7	271.9	309.2	356.8	422.1	511.3	615.3
125°	229.1	230.8	235.5	244.2	259.1	284.9	321.3	365.0	421.2	497.2	588.0
127.5°	242.3	244.3	249.8	258.4	274.7	299.5	333.5	372.1	422.0	486.0	563.0
130°	250.4	252.6	259.3	268.5	284.8	309.0	341.1	377.3	422.8	478.7	548.5
132.5°	255.7	258.6	266.3	277.6	294.1	317.2	347.5	381.8	422.3	472.5	534.5
135°	266.4	269.3	277.7	289.2	305.5	328.3	356.2	386.4	421.3	463.3	515.4
137.5°	276.6	279.6	287.9	300.3	316.5	337.1	362.5	390.0	420.0	455.0	498.9
140°	282.5	286.4	294.3	306.9	322.8	343.0	366.7	391.3	419.1	450.0	488.6
142.5°	290.0	293.1	301.3	312.6	328.0	346.5	368.9	392.2	417.3	444.3	478.6
145°	302.2	304.3	311.0	322.6	335.7	353.8	374.3	395.6	417.7	441.3	469.1
147.5°	313.2	314.6	321.5	331.7	344.7	360.2	379.0	398.1	417.7	438.4	460.7
150°	321.3	322.1	328.4	338.7	349.7	364.0	382.1	398.7	417.7	435.9	455.6
152.5°	329.5	329.7	336.0	345.1	354.8	368.4	384.1	400.0	415.8	432.6	450.5
155°	341.8	341.8	346.6	354.5	363.1	374.3	387.7	400.3	413.7	427.2	442.9
157.5°	351.6	352.2	356.1	363.0	370.4	379.0	389.7	401.1	411.0	422.2	434.4
160°	359.2	359.2	362.4	368.7	374.3	382.1	391.6	401.1	409.8	418.5	428.7
162.5°	365.0	365.0	367.5	372.5	377.4	384.1	392.2	400.4	407.3	414.7	423.0
165°	373.4	372.6	374.3	378.2	381.3	386.9	393.1	398.7	403.4	409.0	415.3
167.5°	379.9	379.0	379.8	382.7	385.0	388.5	393.0	397.5	399.7	403.3	407.9
170°	383.7	382.1	382.9	385.3	386.9	388.5	392.4	395.6	397.2	399.5	403.4
172.5°	386.3	385.3	385.5	387.2	388.1	389.1	392.4	395.0	395.3	396.4	399.0
175°	389.2	388.5	387.7	389.2	389.2	390.0	391.6	393.1	392.4	392.4	393.9
177.5°	390.6	390.0	389.4	390.0	390.0	390.0	390.6	391.9	390.6	390.0	390.6
180°	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0



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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°	199.9	210.4	221.0	227.9	230.9	234.1	237.2	240.1
90°	195.8	207.0	218.1	226.5	228.7	232.6	236.4	238.7
92.5°	233.3	229.6	233.7	236.0	237.4	237.8	241.5	242.9
95°	439.3	357.1	324.8	302.6	290.6	286.6	284.1	284.0
97.5°	852.9	721.0	628.2	539.9	484.7	452.2	433.9	430.2
100°	1068.1	1013.1	929.6	823.3	746.7	692.2	664.4	668.2
102.5°	1135.0	1141.6	1096.3	1031.1	972.1	929.5	906.8	891.7
105°	1146.6	1234.1	1257.7	1242.7	1209.2	1181.9	1159.4	1158.2
107.5°	1074.0	1210.4	1287.8	1321.3	1324.6	1317.2	1311.4	1306.8
110°	1008.7	1161.8	1269.3	1329.8	1354.3	1363.0	1363.9	1364.8



TEST NUMBER: P332023-840

CATALOG NUMBER: S123DIP-S1000D805U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	942.8	1098.9	1218.1	1294.3	1337.5	1359.8	1368.5	1371.5
115°	855.8	1000.5	1123.8	1214.8	1276.5	1313.6	1331.8	1338.3
117.5°	789.6	915.4	1026.9	1119.1	1183.3	1225.4	1250.5	1258.3
120°	754.0	867.6	969.3	1053.6	1118.1	1164.5	1185.6	1192.4
122.5°	724.6	827.9	922.4	1001.0	1058.5	1100.4	1123.4	1131.6
125°	684.5	777.0	859.2	926.7	979.3	1016.1	1038.0	1045.7
127.5°	648.3	731.1	805.6	867.1	914.2	945.9	965.8	973.0
130°	625.3	702.2	771.9	829.4	873.1	903.3	921.8	929.9
132.5°	603.5	674.5	739.5	794.6	836.0	866.5	883.2	889.7
135°	573.8	635.4	692.3	740.7	780.9	806.2	821.9	829.0
137.5°	546.4	597.2	646.3	688.5	722.6	748.1	761.6	766.8
140°	530.2	575.1	617.5	654.6	686.1	709.7	723.9	724.6
142.5°	514.1	552.8	589.8	622.1	649.1	670.2	683.2	683.9
145°	496.8	525.2	553.0	577.7	598.6	616.4	624.0	626.8
147.5°	482.7	504.2	525.3	542.5	558.6	570.9	577.9	579.7
150°	473.7	491.9	508.5	523.7	536.2	545.5	550.9	551.5
152.5°	466.8	482.4	497.1	509.6	519.1	527.3	530.2	530.3
155°	456.4	469.0	480.8	490.3	497.4	503.7	505.3	506.0
157.5°	445.2	455.9	465.0	472.4	478.6	483.3	484.6	484.4
160°	439.0	447.7	455.6	461.1	466.7	471.3	471.3	470.6
162.5°	431.4	438.8	446.1	451.0	454.6	458.7	458.7	458.0
165°	421.6	426.4	431.9	435.9	439.0	442.1	441.3	441.3
167.5°	413.0	416.7	419.9	422.7	424.1	426.4	425.6	425.6
170°	407.4	409.8	412.9	414.5	415.3	416.9	416.1	416.1
172.5°	402.3	404.0	406.6	407.6	407.7	409.3	407.9	407.3
175°	395.6	396.4	397.9	397.9	397.9	398.7	397.9	397.2
177.5°	391.3	391.9	392.5	392.5	391.9	392.5	391.3	391.3
180°	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0

(END OF REPORT)