

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: P332014-840

Luminaire Tested: **S123DIP-S1000D585U840-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332014-840
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-S1000D585U840-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6383.0 lumens
Efficiency: N/A
Efficacy: 130.8 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

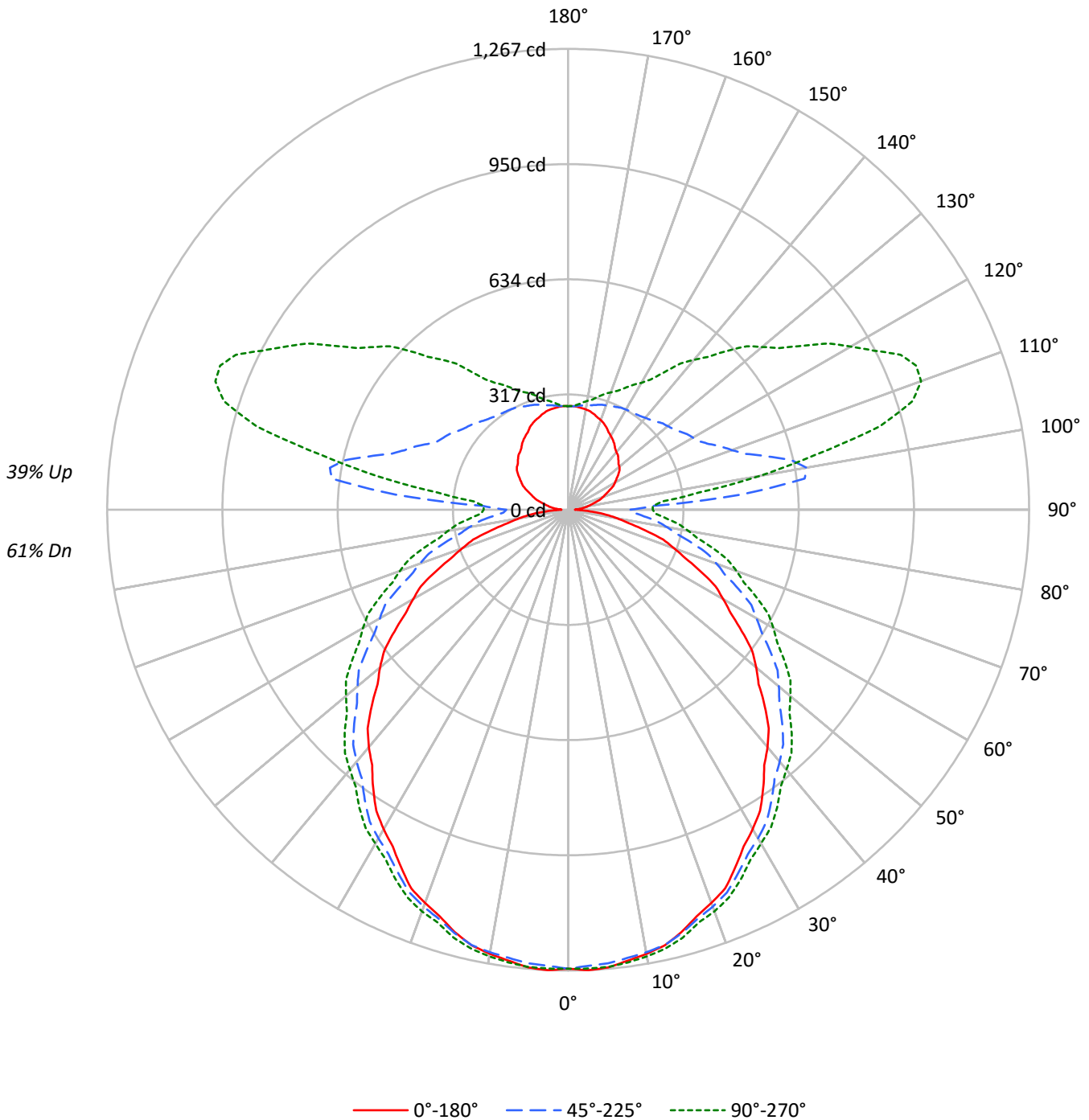
Input Watts (W): 48.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	110	110	110	110	103	103	103	103	89	89	89	77	77	77	66	66	66	61
1	99	94	90	86	92	88	84	80	77	74	71	66	64	62	56	55	53	49
2	90	81	75	69	83	76	70	65	66	62	58	57	54	51	49	46	44	40
3	81	71	63	57	76	67	60	54	58	53	48	50	46	42	43	40	37	33
4	74	63	54	48	69	59	51	45	51	45	41	45	40	36	38	34	31	28
5	68	56	47	41	63	52	45	39	46	40	35	40	35	31	34	30	27	24
6	63	50	41	35	58	47	39	34	41	35	30	36	31	27	31	27	24	21
7	58	45	37	31	54	42	35	29	37	31	27	33	28	24	28	24	21	19
8	54	41	33	27	50	39	31	26	34	28	24	30	25	21	26	22	19	17
9	50	37	30	24	47	35	28	23	31	25	21	28	23	19	24	20	17	15
10	47	34	27	22	44	32	26	21	29	23	19	25	21	17	22	18	15	13

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



TEST NUMBER: P332014-840

CATALOG NUMBER: S123DIP-S1000D585U840-4F0-1E-UDD-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.6	1.9
10°-20°	341.0	5.3
20°-30°	510.0	8.0
30°-40°	609.0	9.5
40°-50°	637.2	10.0
50°-60°	598.0	9.4
60°-70°	499.4	7.8
70°-80°	357.3	5.6
80°-90°	215.3	3.4
90°-100°	292.0	4.6
100°-110°	546.6	8.6
110°-120°	506.7	7.9
120°-130°	389.3	6.1
130°-140°	294.2	4.6
140°-150°	210.6	3.3
150°-160°	144.3	2.3
160°-170°	84.8	1.3
170°-180°	27.6	0.4
0°-30°	970.6	15.2
0°-40°	1579.6	24.7
0°-60°	2814.7	44.1
0°-90°	3886.7	60.9
90°-120°	1345.4	21.1
90°-150°	2239.6	35.1
90°-180°	2496.0	39.1
0°-180°	6383.0	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°	19	92	170	216	232	14
95°	35	133	478	277	259	33
105°	78	144	566	950	887	82
115°	125	172	427	881	1008	124
125°	168	200	375	671	785	150
135°	195	232	342	534	618	151
145°	221	252	322	415	462	138
155°	249	269	312	354	369	115
165°	272	280	298	316	322	77
175°	284	284	286	290	290	27
180°	285	285	285	285	285	



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CATALOG NUMBER: S123DIP-S1000D585U840-4F0-1E-UDD-D4

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°	36.8	52.2	67.7	83.2	98.7	114.3	130.2	146.1	162.1	177.9	188.2
90°	19.0	35.1	51.3	68.0	84.0	100.5	117.8	135.1	152.4	169.8	179.6
92.5°	23.9	40.9	59.2	77.2	95.5	118.5	148.9	189.0	228.6	235.1	223.5
95°	34.7	48.4	66.6	88.3	115.2	151.1	215.0	315.8	425.3	477.7	422.6
97.5°	46.9	58.2	73.9	93.2	118.7	155.5	216.6	327.6	499.4	655.5	701.6
100°	55.0	65.3	79.2	96.9	120.6	154.9	209.3	308.6	474.1	665.1	787.4
102.5°	63.6	73.4	85.7	102.2	123.4	155.3	205.3	291.4	440.2	628.5	785.2
105°	77.9	86.8	97.7	111.9	130.2	158.2	202.5	275.0	397.0	566.2	740.0
107.5°	91.6	99.6	109.2	122.2	138.7	164.6	204.3	266.1	366.4	510.3	668.5
110°	101.6	108.8	117.1	129.0	144.3	169.3	207.4	263.4	352.8	478.5	624.1



TEST NUMBER: P332014-840

CATALOG NUMBER: S123DIP-S1000D585U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	111.7	118.0	125.3	136.2	150.5	174.3	210.2	262.4	342.0	454.3	583.6
115°	124.9	130.9	138.0	147.4	161.0	183.8	216.7	262.9	332.5	427.1	534.0
117.5°	139.3	144.2	149.4	156.9	170.2	190.8	222.8	264.5	324.7	406.4	499.9
120°	148.3	151.6	156.0	163.3	175.7	196.0	226.8	266.8	321.2	395.9	481.2
122.5°	157.1	159.7	163.3	170.3	181.6	202.1	232.0	269.2	319.4	387.1	464.8
125°	168.2	169.5	172.9	179.3	190.2	210.2	239.1	273.4	316.8	374.6	442.6
127.5°	177.8	179.3	183.2	189.3	201.2	220.3	247.0	277.2	315.6	364.3	422.0
130°	183.8	185.2	190.2	196.7	208.5	227.0	252.1	280.1	315.0	357.4	409.9
132.5°	187.3	189.5	195.1	203.3	215.3	232.9	256.3	282.6	313.5	351.4	398.1
135°	195.1	197.1	203.2	211.5	223.3	240.3	261.6	284.5	310.9	342.5	382.0
137.5°	202.5	204.6	210.7	219.5	231.4	246.5	265.6	286.2	308.5	334.7	367.9
140°	206.4	209.3	215.1	224.3	235.8	250.6	268.3	286.5	307.0	329.8	359.1
142.5°	212.0	214.1	220.2	228.1	239.4	252.9	269.3	286.3	304.7	324.5	350.5
145°	220.9	222.3	227.1	235.5	245.0	258.0	273.1	288.6	304.7	321.9	342.8
147.5°	228.4	229.4	234.6	242.1	251.5	262.8	276.5	290.4	304.7	319.8	336.3
150°	234.4	235.0	239.6	247.1	255.2	265.5	278.8	290.8	304.7	317.9	332.3
152.5°	240.4	240.5	245.2	251.8	258.8	268.7	280.1	291.9	303.4	315.7	328.7
155°	249.4	249.4	252.9	258.6	265.0	273.1	282.9	292.1	301.8	311.6	323.2
157.5°	256.5	257.0	259.7	264.9	270.2	276.5	284.3	292.7	299.8	308.0	316.9
160°	262.1	262.1	264.4	269.0	273.1	278.8	285.7	292.7	298.9	305.3	312.8
162.5°	266.2	266.2	268.1	271.8	275.3	280.1	286.2	292.2	297.1	302.6	308.6
165°	272.5	271.9	273.1	275.9	278.2	282.3	286.8	290.8	294.4	298.4	303.0
167.5°	277.2	276.5	277.0	279.2	280.8	283.4	286.7	289.9	291.5	294.2	297.6
170°	279.9	278.8	279.3	281.0	282.3	283.4	286.3	288.6	289.7	291.4	294.4
172.5°	281.8	281.0	281.2	282.5	283.2	283.9	286.3	288.1	288.3	289.1	291.1
175°	284.0	283.4	282.9	284.0	284.0	284.6	285.7	286.8	286.3	286.3	287.4
177.5°	285.0	284.6	284.1	284.6	284.6	284.6	285.0	285.9	285.0	284.6	285.0
180°	284.6	284.6	284.6	284.6	284.6	284.6	284.6	284.6	284.6	284.6	284.6



TEST NUMBER: P332014-840

CATALOG NUMBER: S123DIP-S1000D585U840-4F0-1E-UDD-D4

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°	198.7	209.2	219.7	226.7	229.6	232.8	236.0	238.9
90°	190.5	201.5	212.4	220.3	222.8	226.4	230.0	232.5
92.5°	215.3	215.4	221.1	224.6	226.3	227.4	230.8	232.6
95°	362.3	305.0	284.0	269.5	261.6	259.4	258.5	259.2
97.5°	661.3	567.5	502.3	439.5	400.0	377.2	364.7	362.7
100°	816.4	778.6	720.0	644.2	589.2	550.1	530.7	534.3
102.5°	863.2	870.3	839.7	793.7	751.4	721.2	705.5	695.3
105°	869.0	935.1	954.6	945.3	921.6	902.4	886.8	886.7
107.5°	813.2	914.9	973.6	999.6	1002.7	998.0	994.5	991.9
110°	764.0	877.9	958.4	1003.9	1022.5	1029.6	1030.8	1032.1



TEST NUMBER: P332014-840

CATALOG NUMBER: S123DIP-S1000D585U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	714.0	830.0	919.0	976.0	1008.2	1025.2	1032.3	1035.2
115°	647.9	755.5	847.5	915.1	960.8	988.7	1002.6	1007.9
117.5°	597.1	690.8	774.2	842.7	890.1	921.5	940.5	946.8
120°	569.5	654.2	730.3	793.1	840.8	875.1	891.1	896.8
122.5°	546.4	623.6	694.4	752.9	795.5	826.7	843.9	850.5
125°	514.7	583.9	645.6	696.0	735.0	762.4	779.0	785.2
127.5°	485.9	548.0	603.9	649.8	684.8	708.5	723.7	729.4
130°	467.5	525.1	577.6	620.6	653.0	675.5	689.4	695.9
132.5°	450.0	503.2	552.2	593.4	624.2	646.9	659.7	665.1
135°	426.1	472.5	515.4	551.8	581.5	600.4	612.2	617.7
137.5°	403.9	442.3	479.4	511.0	536.3	555.3	565.6	569.8
140°	390.8	424.7	457.0	484.8	508.2	525.8	536.6	537.6
142.5°	377.6	406.9	434.9	459.3	479.5	495.3	505.1	506.0
145°	363.8	385.2	406.1	424.6	440.2	453.5	459.4	461.7
147.5°	352.6	368.4	384.1	396.8	408.8	418.1	423.6	425.2
150°	345.6	358.8	370.9	382.2	391.4	398.4	402.4	403.0
152.5°	340.5	351.9	362.6	371.8	378.7	384.8	386.9	387.1
155°	333.0	342.1	350.8	357.7	362.8	367.5	368.6	369.2
157.5°	324.9	332.5	339.3	344.7	349.2	352.6	353.6	353.5
160°	320.2	326.6	332.3	336.4	340.4	343.9	343.9	343.3
162.5°	314.8	320.1	325.5	329.0	331.6	334.7	334.7	334.1
165°	307.6	311.0	315.1	317.9	320.2	322.6	321.9	321.9
167.5°	301.3	304.0	306.3	308.4	309.4	311.0	310.4	310.4
170°	297.2	298.9	301.2	302.4	303.0	304.2	303.6	303.6
172.5°	293.6	294.8	296.6	297.3	297.4	298.6	297.6	297.1
175°	288.6	289.1	290.3	290.3	290.3	290.8	290.3	289.7
177.5°	285.5	285.9	286.4	286.4	285.9	286.4	285.5	285.5
180°	284.6	284.6	284.6	284.6	284.6	284.6	284.6	284.6

(END OF REPORT)