

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

Luminaire Tested: **S123DIP-S1000D585U835-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332014
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-S1000D585U835-4F0-1E-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: 6320.7 lumens
Efficiency: N/A
Efficacy: 129.5 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

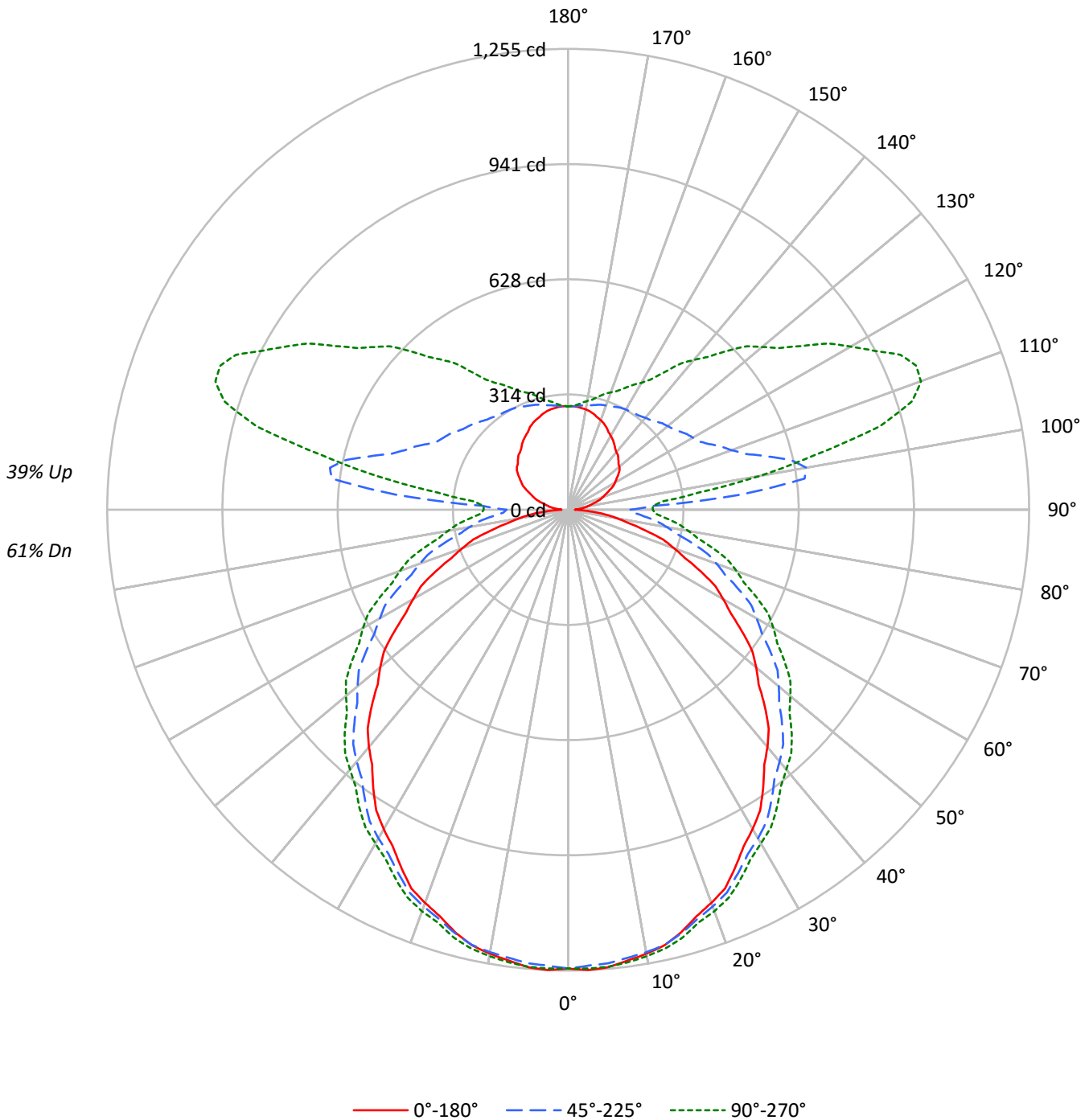
Input Watts (W): 48.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	13448	13448	13448
5°	13490	13110	13117
10°	13370	12808	12744
15°	13197	12465	12336
20°	12951	12074	11888
25°	12647	11623	11416
30°	12335	11217	10938
35°	11987	10789	10556
40°	11653	10399	10147
45°	11284	10024	9821
50°	10920	9654	9461
55°	10517	9275	9136
60°	10125	8890	8804
65°	9723	8481	8409
70°	9115	8019	8005
75°	8351	7490	7593
80°	7467	6971	7122
85°	6653	6616	6850



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.4	1.9
10°-20°	337.6	5.3
20°-30°	505.0	8.0
30°-40°	603.1	9.5
40°-50°	631.0	10.0
50°-60°	592.1	9.4
60°-70°	494.5	7.8
70°-80°	353.8	5.6
80°-90°	213.2	3.4
90°-100°	289.2	4.6
100°-110°	541.3	8.6
110°-120°	501.8	7.9
120°-130°	385.5	6.1
130°-140°	291.3	4.6
140°-150°	208.6	3.3
150°-160°	142.9	2.3
160°-170°	83.9	1.3
170°-180°	27.3	0.4
0°-30°	961.1	15.2
0°-40°	1564.1	24.7
0°-60°	2787.2	44.1
0°-90°	3848.8	60.9
90°-120°	1332.2	21.1
90°-150°	2217.7	35.1
90°-180°	2472.0	39.1
0°-180°	6320.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1249	1249	1249	1249	1249	
5°	1251	1248	1240	1250	1249	119
15°	1191	1195	1194	1206	1206	335
25°	1075	1088	1093	1110	1111	495
35°	926	947	965	985	991	579
45°	757	790	823	848	860	583
55°	577	622	671	706	719	517
65°	399	452	512	551	566	394
75°	216	281	348	392	410	231
85°	67	135	207	251	267	70
90°	19	91	168	214	230	13
95°	34	132	473	274	257	33
105°	77	143	561	941	878	81
115°	124	171	423	873	998	123
125°	167	198	371	664	778	148
135°	193	230	339	528	612	149
145°	219	249	319	411	457	137
155°	247	266	309	351	366	114
165°	270	278	296	313	319	76
175°	281	282	284	288	287	27
180°	282	282	282	282	282	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4
2.5°	1254.9	1254.2	1253.4	1252.7	1252.0	1250.6	1248.7	1246.8	1244.8	1242.9	1244.8
5°	1250.8	1250.2	1249.6	1249.0	1248.4	1247.2	1245.4	1243.5	1241.7	1239.9	1242.3
7.5°	1238.5	1238.7	1238.8	1238.9	1239.0	1238.2	1236.5	1234.7	1232.9	1231.2	1234.2
10°	1227.7	1228.3	1228.9	1229.5	1230.1	1229.6	1228.1	1226.6	1225.1	1223.6	1226.6
12.5°	1214.6	1215.4	1216.3	1217.1	1218.0	1217.9	1216.9	1215.8	1214.8	1213.8	1216.6
15°	1190.9	1191.8	1192.7	1193.6	1194.5	1194.8	1194.5	1194.2	1193.9	1193.6	1196.7
17.5°	1161.0	1162.8	1164.6	1166.4	1168.2	1169.1	1169.0	1168.8	1168.7	1168.6	1171.3
20°	1139.2	1141.0	1142.8	1144.6	1146.4	1147.7	1148.3	1148.9	1149.5	1150.1	1152.8
22.5°	1116.3	1118.1	1120.0	1121.8	1123.6	1124.9	1125.8	1126.6	1127.5	1128.3	1131.7
25°	1075.2	1078.2	1081.3	1084.3	1087.3	1089.3	1090.2	1091.1	1092.0	1092.9	1096.8
27.5°	1033.8	1037.3	1040.7	1044.2	1047.6	1050.3	1052.3	1054.2	1056.1	1058.1	1061.5
30°	1004.4	1008.4	1012.3	1016.2	1020.2	1023.3	1025.8	1028.2	1030.6	1033.0	1036.7
32.5°	971.8	976.2	980.6	985.0	989.4	993.2	996.4	999.5	1002.7	1005.8	1009.7
35°	925.5	930.3	935.2	940.0	944.9	949.2	953.2	957.1	961.0	965.0	969.5
37.5°	876.5	882.0	887.4	892.8	898.3	903.4	908.3	913.1	917.9	922.8	927.9
40°	843.8	849.3	854.7	860.2	865.6	871.4	877.4	883.5	889.5	895.6	900.7
42.5°	807.9	814.6	821.2	827.9	834.5	841.0	847.3	853.6	859.9	866.2	871.8
45°	756.7	764.0	771.3	778.5	785.8	793.2	800.7	808.3	815.9	823.4	829.2
47.5°	703.1	711.3	719.6	727.8	736.0	744.5	753.1	761.8	770.4	779.1	785.5
50°	668.3	676.7	685.2	693.7	702.1	711.1	720.4	729.8	739.2	748.6	755.5
52.5°	631.2	640.2	649.2	658.1	667.1	676.7	687.1	697.4	707.7	718.1	725.3
55°	577.1	587.1	597.0	607.0	617.0	627.4	638.3	649.2	660.1	671.0	679.2
57.5°	524.3	534.7	545.1	555.5	565.9	577.1	589.0	600.9	612.8	624.7	632.9
60°	487.3	498.1	509.0	519.9	530.8	542.4	554.8	567.3	579.7	592.1	600.5
62.5°	452.4	463.5	474.7	485.8	496.9	509.1	522.2	535.3	548.4	561.6	570.0
65°	398.8	410.6	422.4	434.2	446.0	458.5	471.8	485.1	498.4	511.8	520.8
67.5°	344.3	356.9	369.4	381.9	394.4	407.5	421.0	434.6	448.1	461.7	471.6
70°	306.2	319.2	332.2	345.3	358.3	372.0	386.5	401.1	415.6	430.1	439.8
72.5°	271.4	284.4	297.4	310.4	323.4	337.4	352.4	367.4	382.4	397.4	407.3
75°	216.4	230.6	244.8	259.1	273.3	287.9	303.1	318.2	333.3	348.4	358.4
77.5°	168.5	182.8	197.2	211.5	225.8	240.6	255.9	271.1	286.4	301.6	312.1
80°	134.7	149.6	164.4	179.2	194.0	209.3	225.0	240.8	256.5	272.2	282.5
82.5°	105.3	120.4	135.5	150.5	165.6	181.1	197.1	213.0	229.0	245.0	255.3
85°	66.7	81.8	96.9	112.1	127.2	142.8	158.8	174.8	190.8	206.9	217.2
87.5°	36.4	51.7	67.0	82.4	97.7	113.2	128.9	144.7	160.5	176.2	186.4
90°	18.8	34.8	50.8	67.3	83.2	99.5	116.6	133.8	150.9	168.1	177.8
92.5°	23.7	40.5	58.6	76.4	94.6	117.3	147.4	187.2	226.4	232.8	221.3
95°	34.4	47.9	65.9	87.4	114.1	149.6	212.9	312.7	421.1	473.0	418.5
97.5°	46.4	57.6	73.2	92.3	117.5	154.0	214.5	324.4	494.5	649.1	694.7
100°	54.5	64.7	78.4	96.0	119.4	153.4	207.3	305.6	469.5	658.6	779.7
102.5°	63.0	72.7	84.9	101.2	122.2	153.8	203.3	288.6	435.9	622.4	777.5
105°	77.1	86.0	96.7	110.8	128.9	156.7	200.5	272.3	393.1	560.7	732.8
107.5°	90.7	98.6	108.1	121.0	137.3	163.0	202.3	263.5	362.8	505.3	662.0
110°	100.6	107.7	116.0	127.7	142.9	167.6	205.4	260.8	349.4	473.8	618.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	110.6	116.8	124.1	134.9	149.0	172.6	208.1	259.8	338.7	449.9	577.9
115°	123.7	129.6	136.7	146.0	159.4	182.0	214.6	260.3	329.3	422.9	528.8
117.5°	137.9	142.8	147.9	155.4	168.5	188.9	220.6	261.9	321.5	402.4	495.0
120°	146.9	150.1	154.5	161.7	174.0	194.1	224.6	264.2	318.1	392.0	476.5
122.5°	155.6	158.1	161.7	168.6	179.8	200.1	229.7	266.6	316.3	383.3	460.3
125°	166.6	167.8	171.2	177.5	188.3	208.1	236.8	270.7	313.7	370.9	438.3
127.5°	176.1	177.5	181.4	187.5	199.2	218.1	244.6	274.5	312.5	360.7	417.9
130°	182.0	183.4	188.3	194.8	206.5	224.8	249.6	277.4	311.9	353.9	405.9
132.5°	185.5	187.6	193.2	201.3	213.2	230.6	253.8	279.8	310.4	348.0	394.2
135°	193.2	195.2	201.2	209.4	221.1	238.0	259.0	281.7	307.9	339.2	378.3
137.5°	200.5	202.6	208.6	217.4	229.1	244.1	263.0	283.4	305.5	331.4	364.3
140°	204.4	207.3	213.0	222.1	233.5	248.2	265.7	283.7	304.0	326.6	355.6
142.5°	209.9	212.0	218.0	225.9	237.1	250.4	266.7	283.5	301.7	321.3	347.1
145°	218.7	220.1	224.9	233.2	242.6	255.5	270.4	285.8	301.7	318.8	339.5
147.5°	226.2	227.2	232.3	239.7	249.0	260.2	273.8	287.6	301.7	316.7	333.0
150°	232.1	232.7	237.3	244.7	252.7	262.9	276.1	288.0	301.7	314.8	329.1
152.5°	238.1	238.2	242.8	249.3	256.3	266.1	277.4	289.0	300.4	312.6	325.5
155°	247.0	247.0	250.4	256.1	262.4	270.4	280.1	289.2	298.9	308.6	320.0
157.5°	254.0	254.5	257.2	262.3	267.6	273.8	281.5	289.8	296.9	305.0	313.8
160°	259.5	259.5	261.8	266.4	270.4	276.1	282.9	289.8	296.0	302.3	309.7
162.5°	263.6	263.6	265.5	269.1	272.6	277.4	283.4	289.3	294.2	299.6	305.6
165°	269.8	269.2	270.4	273.2	275.5	279.5	284.0	288.0	291.5	295.5	300.0
167.5°	274.5	273.8	274.3	276.5	278.1	280.6	283.9	287.1	288.7	291.3	294.7
170°	277.2	276.1	276.6	278.3	279.5	280.6	283.5	285.8	286.9	288.6	291.5
172.5°	279.0	278.3	278.5	279.7	280.4	281.1	283.5	285.3	285.5	286.3	288.3
175°	281.2	280.6	280.1	281.2	281.2	281.8	282.9	284.0	283.5	283.5	284.6
177.5°	282.2	281.8	281.3	281.8	281.8	281.8	282.2	283.1	282.2	281.8	282.2
180°	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4
2.5°	1246.8	1248.7	1250.6	1251.5	1251.2	1251.0	1250.8	1250.5
5°	1244.7	1247.2	1249.6	1250.6	1250.3	1250.0	1249.7	1249.4
7.5°	1237.2	1240.3	1243.3	1244.6	1244.3	1243.9	1243.5	1243.2
10°	1229.6	1232.6	1235.7	1236.9	1236.3	1235.7	1235.1	1234.5
12.5°	1219.3	1222.1	1224.9	1226.0	1225.4	1224.8	1224.2	1223.6
15°	1199.7	1202.7	1205.7	1207.1	1206.8	1206.5	1206.2	1205.9
17.5°	1174.0	1176.8	1179.5	1180.6	1180.2	1179.8	1179.4	1178.9
20°	1155.5	1158.2	1161.0	1162.5	1162.8	1163.1	1163.4	1163.7
22.5°	1135.2	1138.6	1142.1	1143.7	1143.5	1143.4	1143.2	1143.0
25°	1100.8	1104.7	1108.6	1110.6	1110.6	1110.6	1110.6	1110.6
27.5°	1064.8	1068.2	1071.6	1073.4	1073.7	1073.9	1074.2	1074.4
30°	1040.3	1043.9	1047.5	1049.4	1049.4	1049.4	1049.4	1049.4
32.5°	1013.6	1017.4	1021.3	1023.6	1024.3	1025.0	1025.8	1026.5
35°	974.0	978.6	983.1	986.0	987.2	988.4	989.6	990.8
37.5°	933.1	938.2	943.4	946.4	947.4	948.3	949.3	950.3
40°	905.8	911.0	916.1	919.3	920.5	921.7	922.9	924.1
42.5°	877.4	883.0	888.7	892.3	894.0	895.7	897.4	899.1
45°	834.9	840.7	846.4	850.5	852.9	855.3	857.8	860.2
47.5°	792.0	798.5	804.9	809.1	811.0	812.9	814.7	816.6
50°	762.5	769.4	776.4	780.9	783.1	785.2	787.3	789.4
52.5°	732.5	739.7	746.9	751.8	754.4	757.0	759.6	762.2
55°	687.3	695.5	703.7	708.9	711.4	713.8	716.2	718.6
57.5°	641.2	649.4	657.6	663.2	666.0	668.8	671.7	674.5
60°	609.0	617.5	625.9	631.8	635.2	638.5	641.8	645.1
62.5°	578.5	587.0	595.4	601.2	604.3	607.4	610.5	613.6
65°	529.9	539.0	548.0	554.1	557.1	560.1	563.2	566.2
67.5°	481.5	491.4	501.3	507.6	510.1	512.7	515.2	517.7
70°	449.4	459.1	468.8	475.2	478.2	481.2	484.2	487.3
72.5°	417.3	427.2	437.1	443.6	446.6	449.6	452.7	455.7
75°	368.4	378.4	388.3	395.2	398.8	402.4	406.0	409.7
77.5°	322.7	333.2	343.7	350.4	353.1	355.9	358.7	361.5
80°	292.8	303.1	313.3	320.0	323.0	326.0	329.1	332.1
82.5°	265.6	275.8	286.1	292.8	295.8	298.8	301.8	304.9
85°	227.4	237.7	248.0	254.7	257.7	260.7	263.7	266.8
87.5°	196.8	207.2	217.6	224.5	227.4	230.5	233.7	236.6
90°	188.6	199.5	210.3	218.1	220.6	224.2	227.8	230.2
92.5°	213.2	213.3	218.9	222.4	224.1	225.2	228.5	230.3
95°	358.8	302.0	281.2	266.9	259.0	256.9	256.0	256.7
97.5°	654.8	562.0	497.4	435.2	396.1	373.5	361.1	359.2
100°	808.4	771.0	713.0	637.9	583.4	544.7	525.5	529.1
102.5°	854.8	861.8	831.5	785.9	744.1	714.2	698.6	688.5
105°	860.5	926.0	945.3	936.1	912.6	893.6	878.1	878.0
107.5°	805.3	906.0	964.1	989.8	992.9	988.3	984.8	982.2
110°	756.5	869.3	949.0	994.1	1012.5	1019.5	1020.7	1022.0



TEST NUMBER: P332014

CATALOG NUMBER: S123DIP-S1000D585U835-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	707.0	821.9	910.0	966.5	998.4	1015.2	1022.2	1025.1
115°	641.6	748.1	839.2	906.2	951.4	979.0	992.8	998.1
117.5°	591.3	684.1	766.6	834.5	881.4	912.5	931.3	937.6
120°	563.9	647.8	723.2	785.4	832.6	866.6	882.4	888.0
122.5°	541.1	617.5	687.6	745.5	787.7	818.6	835.7	842.2
125°	509.7	578.2	639.3	689.2	727.8	755.0	771.4	777.5
127.5°	481.2	542.6	598.0	643.5	678.1	701.6	716.6	722.3
130°	462.9	520.0	572.0	614.5	646.6	668.9	682.7	689.1
132.5°	445.6	498.3	546.8	587.6	618.1	640.6	653.3	658.6
135°	421.9	467.9	510.4	546.4	575.8	594.5	606.2	611.7
137.5°	400.0	438.0	474.7	506.0	531.1	549.9	560.1	564.2
140°	387.0	420.6	452.5	480.1	503.2	520.7	531.4	532.3
142.5°	373.9	402.9	430.7	454.8	474.8	490.5	500.2	501.1
145°	360.2	381.4	402.1	420.5	435.9	449.1	454.9	457.2
147.5°	349.2	364.8	380.3	392.9	404.8	414.0	419.5	421.0
150°	342.2	355.3	367.3	378.5	387.6	394.5	398.5	399.1
152.5°	337.2	348.5	359.1	368.2	375.0	381.0	383.1	383.3
155°	329.7	338.8	347.4	354.2	359.3	363.9	365.0	365.6
157.5°	321.7	329.3	336.0	341.3	345.8	349.2	350.1	350.0
160°	317.1	323.4	329.1	333.1	337.1	340.5	340.5	339.9
162.5°	311.7	317.0	322.3	325.8	328.4	331.4	331.4	330.8
165°	304.6	308.0	312.0	314.8	317.1	319.4	318.8	318.8
167.5°	298.4	301.0	303.3	305.4	306.4	308.0	307.4	307.4
170°	294.3	296.0	298.3	299.4	300.0	301.2	300.6	300.6
172.5°	290.7	291.9	293.7	294.4	294.5	295.7	294.7	294.2
175°	285.8	286.3	287.5	287.5	287.5	288.0	287.5	286.9
177.5°	282.7	283.1	283.6	283.6	283.1	283.6	282.7	282.7
180°	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8

(END OF REPORT)