

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: P332340-930

Luminaire Tested: **S123RDIP-S1000D585U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332340-930
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: S123RDIP-S1000D585U930-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4732.9 lumens
Efficiency: N/A
Efficacy: 97.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Direct

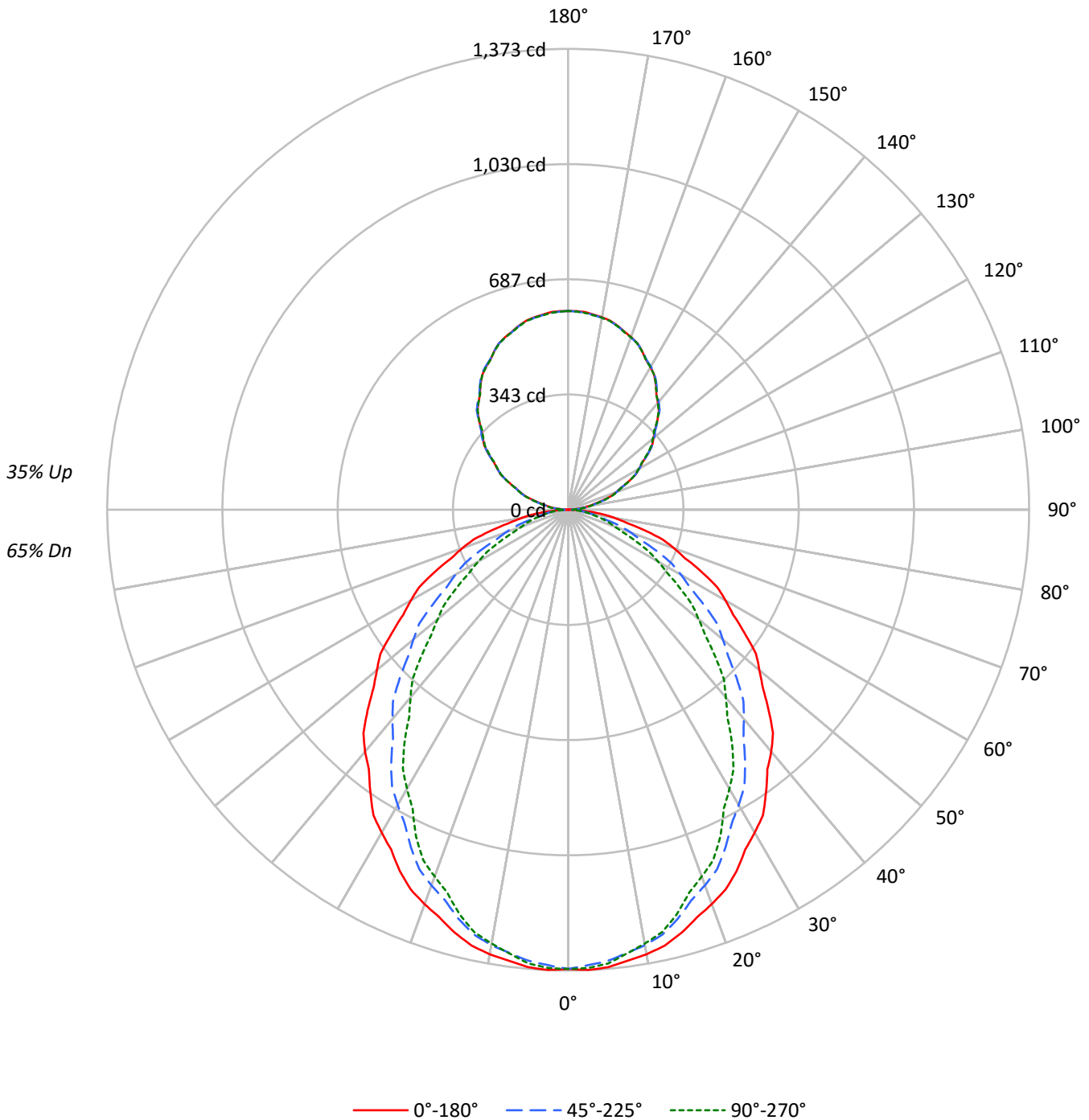
Input Watts (W): 48.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	111	111	111	111	104	104	104	104	92	92	92	81	81	81	70	70	70	65
1	102	97	94	90	95	92	88	85	81	79	76	72	70	68	63	61	60	56
2	93	86	79	74	87	81	75	71	72	68	64	63	60	58	56	53	51	47
3	85	76	68	62	80	71	65	60	64	59	54	56	52	49	50	47	44	41
4	78	67	59	53	73	64	57	51	57	51	47	51	46	42	45	41	38	35
5	72	60	52	46	67	57	50	44	51	45	41	46	41	37	40	37	34	31
6	66	54	46	40	62	51	44	39	46	40	36	41	37	33	37	33	30	27
7	62	49	41	36	58	47	39	34	42	36	32	38	33	29	34	30	27	24
8	57	45	37	32	54	43	36	31	39	33	28	35	30	26	31	27	24	22
9	53	41	34	28	50	39	32	27	36	30	26	32	27	24	29	25	22	20
10	50	38	31	26	47	36	29	25	33	27	23	30	25	22	27	23	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14727	14727	14727
5°	14783	14579	14664
10°	14700	14397	14348
15°	14542	14060	13912
20°	14325	13639	13321
25°	14101	13166	12744
30°	13806	12621	11931
35°	13502	12073	11184
40°	13222	11428	10260
45°	12855	10794	9426
50°	12450	10071	8492
55°	12037	9246	7621
60°	11657	8361	6665
65°	11163	7404	5708
70°	10546	6216	4611
75°	9649	4891	4338
80°	8598	4333	3986
85°	7262	3841	3569



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.5	2.7
10°-20°	357.5	7.6
20°-30°	514.7	10.9
30°-40°	579.8	12.3
40°-50°	554.7	11.7
50°-60°	454.2	9.6
60°-70°	306.5	6.5
70°-80°	154.2	3.3
80°-90°	42.5	0.9
90°-100°	38.6	0.8
100°-110°	115.4	2.4
110°-120°	196.3	4.1
120°-130°	258.2	5.5
130°-140°	290.3	6.1
140°-150°	285.3	6.0
150°-160°	240.2	5.1
160°-170°	159.9	3.4
170°-180°	56.0	1.2
0°-30°	1000.7	21.1
0°-40°	1580.5	33.4
0°-60°	2589.5	54.7
0°-90°	3092.7	65.3
90°-120°	350.3	7.4
90°-150°	1184.1	25.0
90°-180°	1640.0	34.7
0°-180°	4732.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1368	1368	1368	1368	1368	
5°	1368	1362	1349	1359	1357	130
15°	1305	1292	1262	1256	1248	367
25°	1187	1158	1109	1086	1073	546
35°	1028	986	919	873	851	643
45°	844	793	709	648	619	651
55°	641	585	493	431	406	575
65°	438	376	291	239	224	434
75°	232	178	118	107	104	247
85°	59	36	31	29	29	66
90°	0	5	11	13	14	5
95°	28	31	34	36	36	31
105°	105	106	110	110	111	112
115°	198	199	198	198	198	195
125°	289	291	290	288	286	258
135°	375	378	378	376	375	289
145°	455	456	458	457	455	284
155°	521	521	522	523	520	240
165°	568	566	566	569	566	160
175°	591	589	589	591	588	56
180°	592	592	592	592	592	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2
2.5°	1372.6	1371.8	1371.1	1370.3	1369.5	1367.9	1365.5	1363.2	1360.8	1358.5	1360.6
5°	1368.2	1366.9	1365.7	1364.5	1363.3	1361.1	1358.2	1355.3	1352.3	1349.3	1351.5
7.5°	1355.5	1354.2	1352.9	1351.5	1350.2	1347.6	1343.8	1339.9	1336.1	1332.3	1333.5
10°	1344.9	1343.2	1341.4	1339.7	1338.0	1334.9	1330.5	1326.0	1321.6	1317.2	1317.4
12.5°	1329.8	1327.9	1326.0	1324.0	1322.1	1318.4	1313.0	1307.6	1302.2	1296.7	1296.6
15°	1305.0	1302.3	1299.5	1296.8	1294.1	1289.3	1282.4	1275.5	1268.6	1261.7	1260.5
17.5°	1273.7	1270.5	1267.4	1264.2	1261.0	1255.1	1246.3	1237.5	1228.7	1219.9	1217.3
20°	1250.6	1246.7	1242.7	1238.8	1234.8	1228.2	1218.8	1209.4	1200.0	1190.7	1187.5
22.5°	1224.8	1220.3	1215.8	1211.2	1206.7	1199.5	1189.4	1179.5	1169.5	1159.6	1155.6
25°	1187.3	1181.2	1175.0	1168.8	1162.7	1153.9	1142.6	1131.2	1119.9	1108.6	1103.3
27.5°	1141.8	1135.1	1128.2	1121.4	1114.6	1104.9	1092.3	1079.6	1067.0	1054.4	1047.2
30°	1110.8	1103.3	1096.0	1088.6	1081.2	1070.6	1056.8	1042.9	1029.2	1015.4	1007.0
32.5°	1079.7	1071.3	1062.9	1054.5	1046.2	1034.7	1020.1	1005.5	990.8	976.2	967.1
35°	1027.5	1018.6	1009.7	1000.9	992.1	979.9	964.7	949.3	934.1	918.8	908.2
37.5°	974.7	964.8	955.0	945.1	935.2	922.2	905.9	889.5	873.2	856.9	844.8
40°	941.0	930.2	919.2	908.4	897.6	883.4	865.9	848.4	830.9	813.3	800.5
42.5°	902.8	891.9	881.1	870.3	859.4	845.0	826.9	808.8	790.7	772.6	758.6
45°	844.5	833.3	822.2	811.1	800.1	785.1	766.1	747.1	728.1	709.1	695.0
47.5°	786.1	773.9	761.7	749.5	737.4	721.8	702.8	683.8	664.8	645.8	630.6
50°	743.5	731.9	720.3	708.7	697.1	681.3	661.4	641.4	621.4	601.4	586.1
52.5°	705.3	692.8	680.1	667.6	655.0	638.8	619.1	599.2	579.5	559.7	543.8
55°	641.4	629.3	617.2	605.1	593.0	576.5	555.5	534.6	513.6	492.7	478.4
57.5°	582.4	569.2	556.0	542.8	529.7	512.6	491.5	470.4	449.4	428.4	414.8
60°	541.5	528.0	514.4	500.8	487.2	470.3	449.8	429.3	408.9	388.4	375.0
62.5°	500.7	487.1	473.5	460.0	446.5	429.4	409.0	388.5	368.0	347.6	335.0
65°	438.3	424.8	411.2	397.6	384.1	367.7	348.5	329.2	310.0	290.7	278.7
67.5°	375.9	362.2	348.5	334.8	321.1	305.0	286.6	268.2	249.7	231.2	222.3
70°	335.1	321.8	308.5	295.1	281.8	266.6	249.3	232.0	214.7	197.5	188.9
72.5°	294.2	281.2	268.1	254.9	241.8	227.4	211.7	196.1	180.3	164.7	157.6
75°	232.0	220.0	208.2	196.4	184.6	171.9	158.3	144.7	131.2	117.6	115.1
77.5°	175.1	164.4	153.7	143.0	132.3	122.5	113.8	105.1	96.4	87.6	86.3
80°	138.7	128.6	118.5	108.4	98.2	90.7	85.4	80.2	75.1	69.9	69.1
82.5°	104.1	95.4	86.7	77.9	69.1	63.6	61.1	58.8	56.3	53.9	53.2
85°	58.8	53.4	47.9	42.6	37.1	34.0	33.3	32.5	31.8	31.1	30.6
87.5°	21.4	19.4	17.4	15.5	13.5	12.7	13.0	13.2	13.5	13.8	13.7
90°	0.5	1.5	2.5	3.6	4.6	5.8	7.1	8.5	9.8	11.2	11.6
92.5°	11.3	12.0	12.6	13.4	14.1	14.8	15.6	16.3	17.1	17.9	18.2
95°	27.5	28.1	28.9	29.6	30.3	31.1	32.0	32.8	33.6	34.4	34.8
97.5°	48.8	49.2	49.8	50.4	50.9	51.4	52.0	52.7	53.2	53.9	54.3
100°	63.3	63.8	64.5	65.1	65.7	66.3	66.8	67.3	67.8	68.3	68.6
102.5°	80.0	80.4	80.7	81.1	81.4	82.0	82.7	83.4	84.1	84.7	85.0
105°	104.6	104.8	105.0	105.3	105.5	106.0	107.0	107.9	108.8	109.7	109.7
107.5°	133.3	133.4	133.5	133.6	133.8	134.0	134.4	134.8	135.2	135.5	135.8
110°	151.2	151.3	151.6	151.7	152.0	152.1	152.4	152.6	152.8	153.0	153.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	169.7	169.8	170.0	170.1	170.2	170.3	170.4	170.4	170.5	170.5	171.0
115°	197.6	198.0	198.3	198.6	198.9	198.9	198.7	198.5	198.3	198.1	198.2
117.5°	225.8	225.9	226.2	226.3	226.6	226.5	226.2	226.0	225.8	225.4	225.4
120°	243.2	243.9	244.4	245.1	245.7	245.7	245.2	244.8	244.2	243.7	243.6
122.5°	261.5	261.9	262.4	262.8	263.3	263.3	263.1	262.9	262.5	262.3	262.0
125°	289.3	289.6	289.8	290.2	290.5	290.6	290.3	290.2	289.9	289.8	289.3
127.5°	315.0	315.6	316.3	316.9	317.6	317.8	317.6	317.3	317.1	316.9	316.3
130°	332.1	332.9	333.7	334.5	335.3	335.6	335.3	335.0	334.7	334.4	333.9
132.5°	349.1	350.0	350.8	351.6	352.5	352.8	352.5	352.3	352.0	351.9	351.3
135°	375.3	375.9	376.5	377.2	377.7	378.1	377.9	377.8	377.7	377.6	377.2
137.5°	399.5	400.0	400.5	401.0	401.5	401.9	402.2	402.4	402.8	403.0	402.6
140°	416.2	416.7	417.3	417.8	418.2	418.6	418.7	418.8	418.9	419.0	418.9
142.5°	431.5	431.9	432.5	433.0	433.5	433.9	434.1	434.2	434.5	434.6	434.6
145°	455.3	455.5	455.7	455.9	456.1	456.3	456.6	457.0	457.3	457.6	457.5
147.5°	476.1	476.5	476.9	477.2	477.6	477.9	478.3	478.5	478.8	479.1	479.1
150°	490.6	490.8	491.1	491.2	491.5	491.6	491.9	492.0	492.3	492.4	492.4
152.5°	502.6	502.8	503.1	503.4	503.7	503.9	504.0	504.1	504.3	504.3	504.5
155°	521.3	521.3	521.3	521.3	521.3	521.4	521.5	521.5	521.7	521.8	522.2
157.5°	537.3	537.2	537.0	537.0	536.8	536.8	536.9	537.0	537.0	537.1	537.5
160°	547.3	547.1	546.9	546.7	546.5	546.4	546.4	546.4	546.4	546.4	546.9
162.5°	556.3	556.0	555.7	555.4	555.1	555.1	555.1	555.2	555.3	555.4	555.9
165°	567.8	567.5	567.2	566.9	566.6	566.4	566.4	566.4	566.4	566.4	567.0
167.5°	577.0	576.6	576.2	575.8	575.4	575.2	575.3	575.4	575.4	575.5	576.2
170°	582.2	581.8	581.4	581.0	580.6	580.3	580.3	580.3	580.3	580.3	581.1
172.5°	586.3	585.9	585.5	585.1	584.7	584.5	584.5	584.5	584.5	584.5	585.1
175°	590.6	590.2	589.8	589.4	589.0	588.7	588.7	588.7	588.7	588.7	589.4
177.5°	592.4	592.1	591.7	591.3	591.0	590.8	590.8	590.8	590.8	590.8	591.3
180°	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2
2.5°	1362.8	1365.0	1367.1	1368.0	1367.6	1367.3	1366.8	1366.4
5°	1353.8	1356.0	1358.2	1359.1	1358.6	1358.1	1357.6	1357.1
7.5°	1334.7	1335.9	1337.2	1337.4	1336.5	1335.7	1334.9	1334.0
10°	1317.7	1317.9	1318.2	1317.7	1316.4	1315.2	1313.9	1312.7
12.5°	1296.4	1296.3	1296.2	1295.3	1294.0	1292.5	1291.1	1289.6
15°	1259.2	1258.0	1256.8	1255.2	1253.5	1251.8	1250.1	1248.4
17.5°	1214.7	1212.1	1209.5	1206.9	1204.4	1201.8	1199.2	1196.6
20°	1184.2	1181.0	1177.9	1174.8	1171.8	1168.8	1165.9	1162.9
22.5°	1151.6	1147.6	1143.6	1140.2	1137.5	1134.7	1132.0	1129.2
25°	1098.2	1093.0	1087.9	1083.9	1081.2	1078.5	1075.8	1073.0
27.5°	1040.0	1032.8	1025.6	1019.9	1015.8	1011.6	1007.5	1003.4
30°	998.6	990.2	981.8	975.7	971.7	967.8	963.8	959.9
32.5°	957.9	948.8	939.6	932.9	928.8	924.6	920.5	916.3
35°	897.6	887.0	876.4	868.9	864.5	860.0	855.6	851.1
37.5°	832.8	820.8	808.8	800.0	794.5	789.0	783.6	778.1
40°	787.7	774.9	762.1	752.8	747.1	741.5	735.8	730.2
42.5°	744.5	730.5	716.5	706.9	701.9	696.8	691.7	686.6
45°	680.9	666.9	652.8	642.9	636.9	631.0	625.1	619.2
47.5°	615.2	600.0	584.7	574.4	569.1	563.9	558.6	553.3
50°	570.9	555.5	540.3	529.8	524.2	518.4	512.8	507.1
52.5°	528.0	512.1	496.2	485.7	480.6	475.6	470.5	465.4
55°	464.1	449.8	435.5	425.8	420.9	416.0	411.1	406.1
57.5°	401.3	387.8	374.3	365.4	361.3	357.0	352.9	348.6
60°	361.7	348.5	335.1	326.4	322.2	318.0	313.8	309.6
62.5°	322.5	310.0	297.4	288.9	284.6	280.2	275.8	271.4
65°	266.6	254.5	242.4	235.0	232.3	229.6	226.9	224.1
67.5°	213.2	204.2	195.2	189.1	186.3	183.4	180.4	177.6
70°	180.3	171.6	163.0	157.4	154.6	151.9	149.2	146.5
72.5°	150.6	143.5	136.5	132.4	131.3	130.1	129.0	127.8
75°	112.7	110.2	107.8	106.3	105.8	105.3	104.8	104.3
77.5°	85.0	83.6	82.3	81.4	81.0	80.5	80.0	79.5
80°	68.4	67.7	66.9	66.4	65.9	65.4	64.8	64.3
82.5°	52.4	51.7	51.0	50.5	50.5	50.4	50.2	50.1
85°	30.1	29.6	29.1	28.9	28.9	28.9	28.9	28.9
87.5°	13.5	13.5	13.3	13.2	13.0	12.9	12.7	12.6
90°	12.0	12.4	12.8	13.1	13.4	13.5	13.8	13.9
92.5°	18.5	18.8	19.2	19.3	19.2	19.0	18.9	18.8
95°	35.2	35.6	36.0	36.3	36.3	36.3	36.3	36.3
97.5°	54.8	55.3	55.8	55.9	55.9	55.8	55.8	55.8
100°	69.0	69.3	69.6	69.9	70.0	70.3	70.4	70.7
102.5°	85.4	85.7	85.9	86.1	86.1	86.0	86.0	85.9
105°	109.7	109.7	109.7	109.8	110.1	110.2	110.5	110.7
107.5°	136.2	136.5	136.8	137.0	136.8	136.7	136.6	136.5
110°	153.8	154.3	154.7	154.7	154.6	154.3	154.2	153.9



TEST NUMBER: P332340-930

CATALOG NUMBER: S123RDIP-S1000D585U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	171.5	171.9	172.4	172.7	172.7	172.6	172.6	172.5
115°	198.3	198.4	198.5	198.5	198.4	198.3	198.2	198.1
117.5°	225.4	225.3	225.3	225.2	224.9	224.6	224.4	224.0
120°	243.4	243.4	243.3	243.1	242.9	242.7	242.5	242.3
122.5°	261.7	261.5	261.2	260.9	260.7	260.3	260.1	259.8
125°	288.9	288.5	288.0	287.6	287.2	286.8	286.4	286.0
127.5°	315.7	315.1	314.5	314.1	313.6	313.1	312.6	312.1
130°	333.5	333.1	332.7	332.2	331.4	330.7	330.0	329.2
132.5°	350.8	350.3	349.8	349.4	348.8	348.2	347.6	347.1
135°	376.7	376.3	375.9	375.6	375.4	375.2	375.0	374.8
137.5°	402.1	401.7	401.3	400.9	400.5	400.1	399.7	399.3
140°	418.8	418.7	418.6	418.2	417.4	416.7	416.0	415.3
142.5°	434.4	434.3	434.2	433.9	433.3	432.8	432.2	431.6
145°	457.4	457.3	457.2	456.9	456.5	456.1	455.7	455.3
147.5°	479.1	479.1	479.1	478.7	478.2	477.5	477.0	476.3
150°	492.4	492.4	492.4	492.2	491.5	490.9	490.3	489.7
152.5°	504.8	504.9	505.1	504.8	504.3	503.8	503.3	502.7
155°	522.6	523.0	523.4	523.3	522.5	521.8	521.1	520.4
157.5°	538.0	538.4	538.8	538.7	538.2	537.6	537.0	536.5
160°	547.5	548.0	548.5	548.5	548.1	547.7	547.3	546.9
162.5°	556.4	556.9	557.4	557.3	556.7	556.0	555.4	554.7
165°	567.7	568.3	568.9	568.8	568.1	567.4	566.7	566.0
167.5°	576.8	577.5	578.1	578.1	577.5	576.8	576.2	575.5
170°	581.8	582.5	583.3	583.3	582.5	581.8	581.1	580.3
172.5°	585.7	586.4	587.0	587.0	586.3	585.5	584.8	584.1
175°	590.0	590.6	591.3	591.2	590.4	589.7	589.0	588.2
177.5°	591.9	592.4	592.9	592.8	592.2	591.7	591.1	590.5
180°	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0

(END OF REPORT)