

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: P332345-930

Luminaire Tested: **S123RDIP-S1000D805U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332345-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-S1000D805U930-4F0-1E-UDD-F  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 805 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5709.6 lumens  
Efficiency: N/A  
Efficacy: 105.0 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: General Diffuse

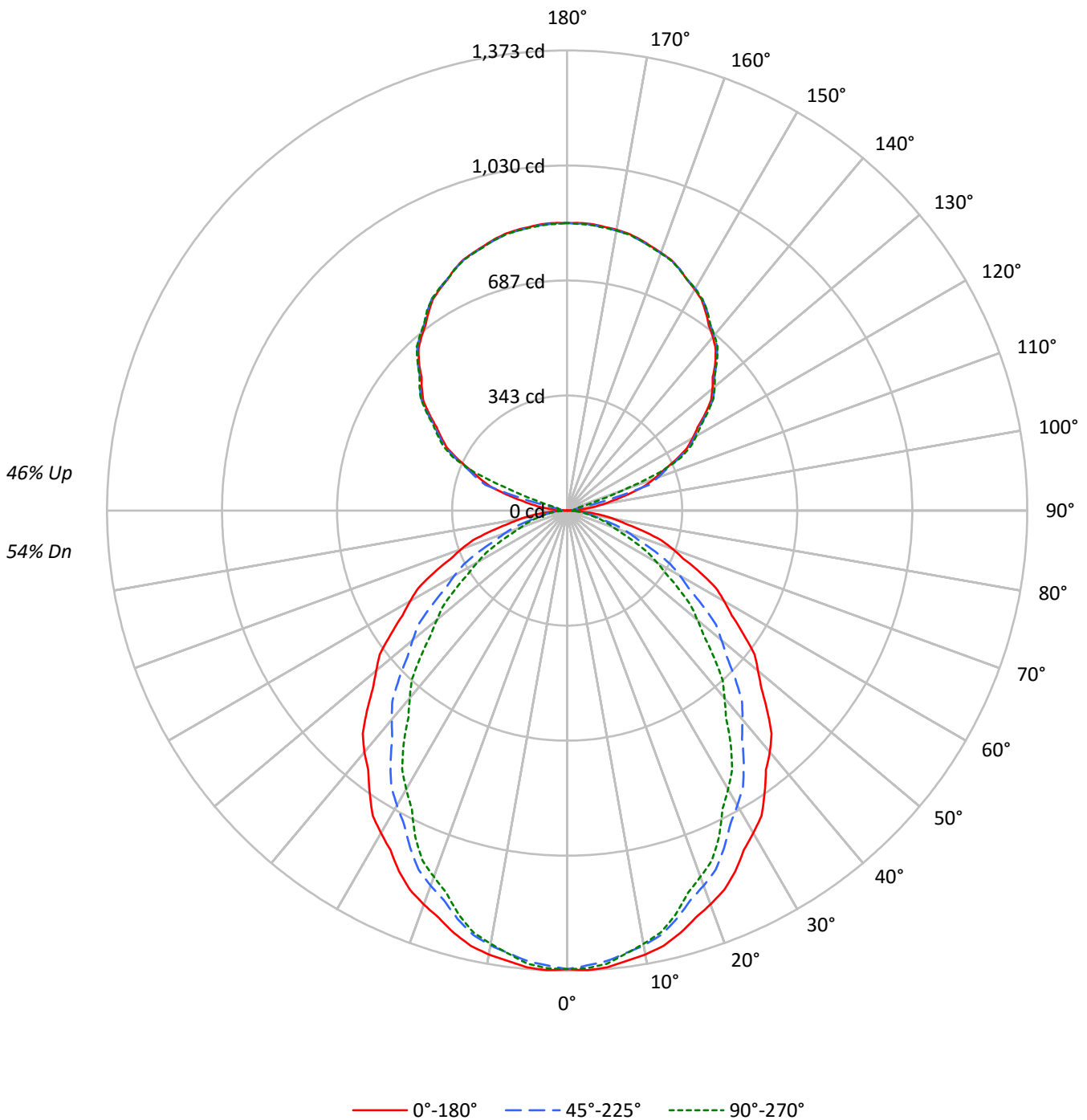
Input Watts (W): 54.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	91	88	92	88	85	82	76	73	71	64	62	61	54	52	51	46
2	90	83	77	72	84	77	72	68	67	63	59	57	54	51	48	46	44	39
3	83	73	66	61	77	68	62	57	59	54	50	50	47	44	42	40	38	34
4	76	65	57	51	70	61	54	49	53	47	43	45	41	38	38	35	33	29
5	70	58	50	44	65	55	47	42	47	42	37	41	36	33	34	31	29	26
6	64	52	44	39	60	49	42	37	43	37	33	37	32	29	31	28	25	23
7	60	47	40	34	55	45	37	32	39	33	29	34	29	26	29	25	23	20
8	55	43	36	30	51	41	34	29	36	30	26	31	26	23	26	23	20	18
9	52	40	32	27	48	37	30	26	33	27	23	28	24	21	24	21	19	16
10	48	36	29	24	45	34	28	23	30	25	21	26	22	19	23	19	17	15

**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	2.3
10°-20°	357.5	6.3
20°-30°	514.7	9.0
30°-40°	579.8	10.2
40°-50°	554.7	9.7
50°-60°	454.2	8.0
60°-70°	306.5	5.4
70°-80°	154.2	2.7
80°-90°	43.2	0.8
90°-100°	31.2	0.5
100°-110°	148.7	2.6
110°-120°	357.1	6.3
120°-130°	454.7	8.0
130°-140°	485.8	8.5
140°-150°	454.3	8.0
150°-160°	366.5	6.4
160°-170°	236.5	4.1
170°-180°	81.5	1.4
0°-30°	1000.7	17.5
0°-40°	1580.5	27.7
0°-60°	2589.5	45.4
0°-90°	3093.3	54.2
90°-120°	536.9	9.4
90°-150°	1931.8	33.8
90°-180°	2616.0	45.8
0°-180°	5709.6	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°	1	7	15	18	19	5
95°	39	15	20	24	24	48
105°	190	193	140	33	28	201
115°	356	360	366	372	375	352
125°	502	507	510	511	512	448
135°	625	629	632	633	632	481
145°	722	726	727	728	729	451
155°	795	794	794	797	794	366
165°	838	836	836	840	836	237
175°	858	855	855	859	855	82
180°	858	858	858	858	858	



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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	19.6	17.7	15.7	13.9	13.1	13.5	13.9	14.3	14.6	14.5
90°	0.7	2.0	3.5	4.9	6.3	7.9	9.8	11.6	13.5	15.3	15.9
92.5°	11.8	11.5	11.1	10.7	10.3	10.8	12.1	13.5	14.9	16.3	17.2
95°	38.9	33.1	27.2	21.4	15.7	13.5	15.1	16.6	18.2	19.7	20.8
97.5°	78.1	75.6	73.0	70.4	67.8	61.3	51.1	40.9	30.7	20.5	21.7
100°	107.7	110.6	113.4	116.2	119.0	109.4	87.3	65.2	43.1	21.0	22.2
102.5°	141.4	143.4	145.4	147.5	149.5	138.5	114.4	90.2	66.0	41.9	38.4
105°	190.0	191.5	193.1	194.6	196.2	190.6	177.8	165.1	152.3	139.6	114.5
107.5°	241.2	242.5	243.7	244.9	246.1	247.8	249.8	251.8	253.8	255.8	237.5
110°	275.3	276.5	277.6	278.8	279.9	281.2	282.8	284.4	285.9	287.5	282.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	308.0	309.0	310.1	311.0	312.1	313.3	315.0	316.5	318.0	319.6	319.7
115°	356.3	357.2	358.0	358.9	359.7	360.8	362.1	363.3	364.6	365.9	367.3
117.5°	403.1	404.1	405.2	406.3	407.2	408.1	408.8	409.4	410.1	410.7	411.9
120°	432.2	433.4	434.7	435.9	437.2	438.1	438.5	439.0	439.4	439.8	440.9
122.5°	461.7	462.8	463.8	464.9	465.9	466.7	467.2	467.8	468.3	468.9	469.7
125°	502.3	503.4	504.5	505.6	506.8	507.7	508.3	508.7	509.3	509.9	510.2
127.5°	541.5	542.7	543.8	544.9	546.1	547.0	547.6	548.4	549.0	549.7	550.2
130°	566.0	567.1	568.3	569.4	570.5	571.4	571.9	572.5	573.1	573.6	574.2
132.5°	589.5	590.6	591.7	592.9	594.0	594.8	595.3	595.7	596.1	596.6	597.2
135°	625.3	626.1	627.0	627.9	628.7	629.4	630.0	630.6	631.1	631.7	632.1
137.5°	655.9	657.0	658.0	659.1	660.1	660.9	661.2	661.5	661.8	662.1	662.8
140°	676.3	677.1	678.0	678.8	679.7	680.3	680.8	681.2	681.6	682.0	682.6
142.5°	695.1	696.0	696.8	697.7	698.5	699.2	699.6	700.0	700.4	700.9	701.3
145°	721.5	722.5	723.5	724.5	725.5	726.1	726.4	726.7	727.0	727.2	727.6
147.5°	746.4	747.1	747.7	748.4	749.0	749.5	749.7	750.0	750.3	750.6	750.9
150°	761.7	762.1	762.5	763.0	763.4	763.8	764.0	764.3	764.6	764.9	765.2
152.5°	775.4	775.7	775.8	776.1	776.2	776.4	776.6	776.7	777.0	777.1	777.6
155°	794.8	794.6	794.3	794.0	793.7	793.6	793.8	793.9	794.0	794.2	794.9
157.5°	809.8	809.8	809.8	809.8	809.8	809.7	809.5	809.4	809.3	809.1	810.0
160°	819.0	818.9	818.8	818.6	818.5	818.3	818.2	818.1	817.9	817.7	818.6
162.5°	827.7	827.4	827.0	826.6	826.2	826.0	825.8	825.7	825.6	825.4	826.4
165°	838.2	837.7	837.3	836.9	836.5	836.2	836.1	835.9	835.8	835.6	836.7
167.5°	846.4	845.8	845.2	844.7	844.1	843.8	843.8	843.8	843.8	843.8	844.9
170°	850.9	850.4	849.8	849.2	848.6	848.4	848.4	848.4	848.4	848.4	849.5
172.5°	853.9	853.3	852.6	851.9	851.3	851.0	851.1	851.2	851.3	851.4	852.6
175°	857.9	857.2	856.6	855.8	855.1	854.8	854.9	855.1	855.2	855.4	856.4
177.5°	858.9	858.4	857.9	857.3	856.7	856.5	856.6	856.7	856.8	856.9	857.9
180°	857.9	857.9	857.9	857.9	857.9	857.9	857.9	857.9	857.9	857.9	857.9



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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°	14.4	14.3	14.3	14.2	14.0	13.9	13.7	13.6
90°	16.5	17.0	17.5	18.0	18.3	18.6	18.8	19.2
92.5°	18.1	19.0	20.0	20.5	20.6	20.8	21.0	21.2
95°	21.8	22.7	23.7	24.2	24.2	24.2	24.2	24.2
97.5°	22.8	23.9	25.0	25.7	25.8	26.0	26.1	26.3
100°	23.3	24.5	25.6	26.2	26.3	26.5	26.7	26.7
102.5°	34.9	31.4	27.9	26.3	26.5	26.7	27.0	27.3
105°	89.4	64.4	39.3	26.9	27.2	27.5	27.8	28.0
107.5°	219.1	200.7	182.3	163.6	144.8	125.9	107.0	88.1
110°	278.1	273.5	268.8	256.3	236.0	215.8	195.5	175.3





TEST NUMBER: P332345-930

CATALOG NUMBER: S123RDIP-S1000D805U930-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	319.8	319.8	319.9	317.8	313.6	309.2	305.0	300.8
115°	368.7	370.1	371.5	372.5	373.1	373.7	374.2	374.8
117.5°	413.0	414.2	415.2	415.9	416.0	416.1	416.2	416.4
120°	442.1	443.2	444.3	444.9	444.9	444.9	444.9	444.9
122.5°	470.4	471.2	472.1	472.5	472.6	472.7	472.9	473.0
125°	510.5	510.8	511.0	511.4	511.6	511.9	512.2	512.5
127.5°	550.6	551.1	551.5	551.5	551.3	551.1	550.7	550.5
130°	574.8	575.4	575.9	576.1	575.8	575.5	575.2	574.9
132.5°	597.7	598.3	598.8	598.9	598.6	598.2	597.8	597.4
135°	632.5	632.9	633.3	633.3	632.9	632.5	632.1	631.7
137.5°	663.5	664.1	664.9	665.0	664.8	664.5	664.2	663.9
140°	683.1	683.7	684.3	684.4	684.1	683.9	683.5	683.3
142.5°	701.8	702.2	702.7	702.7	702.3	701.9	701.6	701.2
145°	727.8	728.1	728.4	728.6	728.6	728.6	728.6	728.6
147.5°	751.1	751.5	751.7	751.5	750.9	750.2	749.6	748.9
150°	765.4	765.7	766.0	766.0	765.5	765.1	764.7	764.3
152.5°	778.1	778.6	779.2	779.1	778.4	777.8	777.1	776.5
155°	795.7	796.3	797.0	797.0	796.1	795.2	794.4	793.5
157.5°	810.8	811.6	812.5	812.4	811.3	810.2	809.1	808.0
160°	819.5	820.4	821.2	821.1	820.1	819.1	818.2	817.2
162.5°	827.4	828.3	829.2	829.3	828.4	827.5	826.7	825.8
165°	837.9	839.0	840.2	840.2	839.3	838.2	837.2	836.3
167.5°	846.0	847.2	848.3	848.3	847.2	846.0	844.9	843.8
170°	850.6	851.7	852.9	852.9	851.7	850.6	849.5	848.4
172.5°	853.7	854.8	856.0	855.9	854.7	853.5	852.2	850.9
175°	857.4	858.3	859.3	859.2	858.2	857.0	855.9	854.8
177.5°	858.8	859.7	860.5	860.5	859.3	858.2	857.0	855.9
180°	857.9	857.9	857.9	857.9	857.9	857.9	857.9	857.9

(END OF REPORT)