

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: P332315-830

Luminaire Tested: **S123RDIP-S775D805U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332315-830  
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-S775D805U830-4F0-1E-UDD-F  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 775 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: 5776.4 lumens  
Efficiency: N/A  
Efficacy: 125.8 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

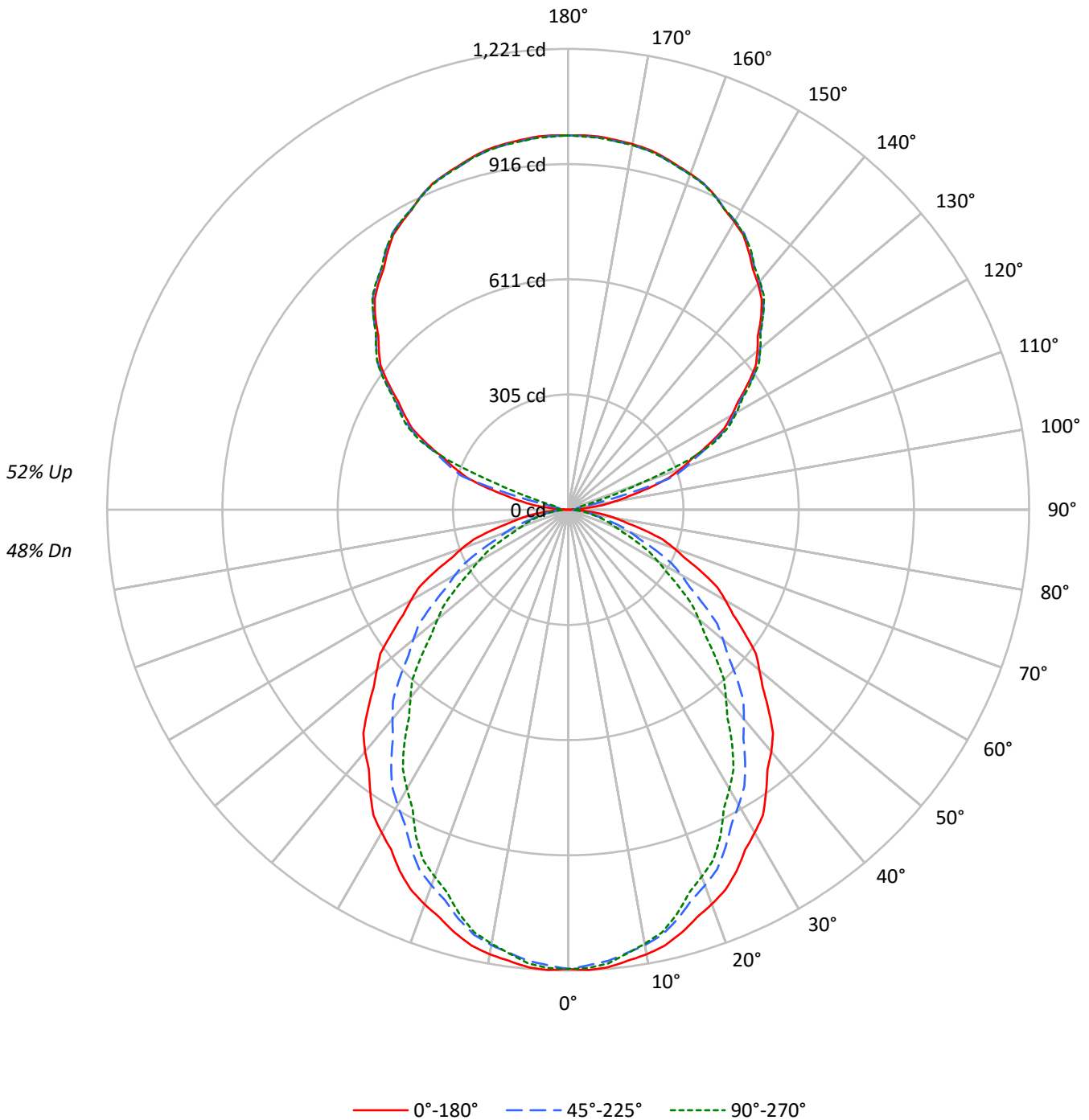
Input Watts (W): 45.9  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332315-830

CATALOG NUMBER: S123RDIP-S775D805U830-4F0-1E-UDD-F

### Luminous Intensity Polar Plot





TEST NUMBER: P332315-830

CATALOG NUMBER: S123RDIP-S775D805U830-4F0-1E-UDD-F

**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	107	107	107	107	98	98	98	98	82	82	82	67	67	67	54	54	54	48
1	98	93	90	86	90	86	83	80	72	70	68	60	58	57	48	47	46	41
2	89	82	76	71	82	76	70	66	64	60	57	53	50	48	43	41	39	35
3	81	72	65	59	75	67	61	56	56	52	48	47	44	41	38	36	34	30
4	75	64	56	50	68	59	53	47	50	45	41	42	38	35	34	32	29	26
5	69	57	49	43	63	53	46	41	45	40	36	38	34	31	31	28	26	22
6	63	51	43	38	58	48	41	36	41	35	31	34	30	27	28	25	23	20
7	59	46	39	33	54	43	36	31	37	32	28	31	27	24	26	23	20	18
8	54	42	35	29	50	39	33	28	34	28	25	29	24	21	24	21	18	16
9	51	39	31	26	47	36	29	25	31	26	22	26	22	19	22	19	17	14
10	47	35	28	24	44	33	27	22	29	23	20	24	20	18	20	17	15	13

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	13099	13099	13099
5°	13149	12967	13042
10°	13074	12804	12761
15°	12933	12504	12373
20°	12741	12129	11848
25°	12542	11709	11334
30°	12279	11225	10611
35°	12009	10738	9947
40°	11760	10165	9125
45°	11432	9601	8383
50°	11072	8957	7552
55°	10704	8223	6778
60°	10368	7436	5927
65°	9928	6584	5076
70°	9379	5530	4101
75°	8576	4350	3855
80°	7649	3856	3546
85°	6459	3409	3162



TEST NUMBER: P332315-830

CATALOG NUMBER: S123RDIP-S775D805U830-4F0-1E-UDD-F

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.3	2.0
10°-20°	317.9	5.5
20°-30°	457.8	7.9
30°-40°	515.7	8.9
40°-50°	493.3	8.5
50°-60°	404.0	7.0
60°-70°	272.6	4.7
70°-80°	137.1	2.4
80°-90°	39.1	0.7
90°-100°	36.1	0.6
100°-110°	171.9	3.0
110°-120°	412.8	7.1
120°-130°	525.7	9.1
130°-140°	561.7	9.7
140°-150°	525.2	9.1
150°-160°	423.7	7.3
160°-170°	273.4	4.7
170°-180°	94.2	1.6
0°-30°	890.0	15.4
0°-40°	1405.7	24.3
0°-60°	2303.0	39.9
0°-90°	2751.8	47.6
90°-120°	620.7	10.7
90°-150°	2233.3	38.7
90°-180°	3025.0	52.4
0°-180°	5776.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1217	1217	1217	1217	1217	
5°	1217	1212	1200	1208	1207	115
15°	1161	1149	1122	1117	1110	327
25°	1056	1030	986	966	954	485
35°	914	877	817	776	757	572
45°	751	705	631	576	551	579
55°	570	520	438	383	361	511
65°	390	334	258	212	199	386
75°	206	159	105	95	93	220
85°	52	32	28	26	26	59
90°	1	8	18	21	22	5
95°	45	17	23	28	28	56
105°	220	224	161	38	32	233
115°	412	416	423	430	433	406
125°	581	586	590	591	592	518
135°	723	727	730	732	730	556
145°	834	839	841	842	842	522
155°	919	918	918	921	917	423
165°	969	967	966	971	967	274
175°	992	988	989	993	988	94
180°	992	992	992	992	992	



TEST NUMBER: P332315-830

CATALOG NUMBER: S123RDIP-S775D805U830-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9
2.5°	1220.8	1220.1	1219.4	1218.7	1218.0	1216.6	1214.5	1212.4	1210.3	1208.2	1210.1
5°	1216.9	1215.8	1214.7	1213.6	1212.5	1210.6	1208.0	1205.3	1202.7	1200.1	1202.0
7.5°	1205.6	1204.5	1203.2	1202.0	1200.9	1198.5	1195.1	1191.8	1188.4	1184.9	1186.0
10°	1196.2	1194.6	1193.1	1191.6	1190.0	1187.2	1183.3	1179.4	1175.4	1171.5	1171.7
12.5°	1182.7	1181.0	1179.3	1177.6	1175.9	1172.6	1167.8	1163.0	1158.1	1153.3	1153.2
15°	1160.6	1158.2	1155.7	1153.4	1150.9	1146.7	1140.6	1134.4	1128.2	1122.1	1121.1
17.5°	1132.7	1130.0	1127.2	1124.4	1121.5	1116.3	1108.4	1100.6	1092.8	1085.1	1082.7
20°	1112.3	1108.7	1105.2	1101.7	1098.3	1092.3	1083.9	1075.6	1067.3	1058.9	1056.1
22.5°	1089.4	1085.3	1081.3	1077.2	1073.2	1066.8	1057.9	1049.0	1040.2	1031.3	1027.7
25°	1056.0	1050.6	1045.0	1039.5	1034.1	1026.2	1016.2	1006.1	996.0	985.9	981.3
27.5°	1015.5	1009.5	1003.4	997.4	991.4	982.7	971.5	960.3	949.0	937.7	931.3
30°	987.9	981.3	974.8	968.2	961.6	952.2	939.9	927.6	915.3	903.1	895.6
32.5°	960.3	952.8	945.4	937.9	930.5	920.2	907.2	894.3	881.3	868.3	860.2
35°	913.9	906.0	898.1	890.2	882.3	871.6	858.0	844.3	830.8	817.2	807.8
37.5°	867.0	858.1	849.3	840.6	831.8	820.2	805.7	791.2	776.7	762.1	751.4
40°	836.9	827.3	817.6	807.9	798.3	785.7	770.2	754.6	739.0	723.4	712.0
42.5°	803.0	793.3	783.6	774.0	764.4	751.5	735.4	719.3	703.2	687.1	674.7
45°	751.0	741.2	731.3	721.4	711.5	698.2	681.3	664.4	647.5	630.7	618.1
47.5°	699.2	688.3	677.5	666.7	655.8	642.0	625.1	608.1	591.3	574.4	560.8
50°	661.2	650.9	640.6	630.3	620.0	606.0	588.2	570.4	552.7	534.9	521.3
52.5°	627.3	616.1	604.9	593.7	582.6	568.2	550.5	533.0	515.4	497.8	483.7
55°	570.4	559.7	548.9	538.2	527.4	512.7	494.1	475.5	456.9	438.2	425.5
57.5°	517.9	506.2	494.6	482.8	471.1	455.9	437.2	418.4	399.6	381.0	368.9
60°	481.6	469.6	457.5	445.4	433.4	418.2	400.0	381.8	363.6	345.4	333.6
62.5°	445.3	433.2	421.1	409.1	397.1	381.9	363.7	345.5	327.3	309.1	297.9
65°	389.8	377.8	365.7	353.6	341.6	327.0	309.9	292.8	275.7	258.5	247.8
67.5°	334.4	322.2	310.0	297.7	285.6	271.3	254.9	238.5	222.1	205.7	197.7
70°	298.0	286.3	274.4	262.5	250.7	237.0	221.7	206.4	191.1	175.7	168.0
72.5°	261.7	250.1	238.4	226.7	215.1	202.3	188.3	174.4	160.4	146.5	140.2
75°	206.2	195.8	185.2	174.7	164.2	152.9	140.8	128.8	116.7	104.6	102.5
77.5°	155.7	146.2	136.7	127.1	117.6	109.1	101.2	93.5	85.8	77.9	76.8
80°	123.4	114.3	105.4	96.4	87.4	80.6	76.0	71.4	66.8	62.2	61.5
82.5°	92.6	84.8	77.0	69.3	61.5	56.6	54.4	52.2	50.1	48.0	47.3
85°	52.3	47.5	42.7	37.8	33.0	30.3	29.6	28.9	28.3	27.6	27.2
87.5°	19.1	17.5	15.9	14.3	12.7	12.1	12.5	12.9	13.4	13.8	13.8
90°	0.8	2.4	4.1	5.7	7.3	9.1	11.3	13.4	15.6	17.7	18.4
92.5°	13.7	13.3	12.8	12.3	11.9	12.4	14.0	15.6	17.2	18.9	19.9
95°	45.0	38.3	31.5	24.8	18.1	15.6	17.4	19.2	21.0	22.8	24.0
97.5°	90.3	87.4	84.4	81.3	78.3	70.9	59.1	47.3	35.5	23.8	25.1
100°	124.5	127.8	131.1	134.3	137.6	126.5	100.9	75.4	49.9	24.3	25.6
102.5°	163.4	165.8	168.1	170.5	172.9	160.1	132.2	104.2	76.3	48.4	44.4
105°	219.6	221.4	223.2	225.0	226.8	220.4	205.6	190.9	176.1	161.4	132.4
107.5°	278.8	280.3	281.7	283.1	284.6	286.4	288.8	291.2	293.4	295.8	274.6
110°	318.3	319.6	320.9	322.3	323.6	325.1	327.0	328.8	330.5	332.3	327.0



TEST NUMBER: P332315-830

CATALOG NUMBER: S123RDIP-S775D805U830-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	356.1	357.2	358.4	359.6	360.8	362.2	364.1	365.9	367.7	369.5	369.6
115°	411.9	412.9	413.9	414.9	415.8	417.1	418.6	420.0	421.5	423.0	424.6
117.5°	466.0	467.2	468.4	469.7	470.8	471.8	472.6	473.3	474.1	474.9	476.2
120°	499.6	501.1	502.6	504.0	505.5	506.5	507.0	507.5	507.9	508.4	509.7
122.5°	533.8	535.0	536.2	537.4	538.7	539.5	540.2	540.8	541.4	542.1	543.0
125°	580.7	581.9	583.2	584.6	585.9	586.9	587.6	588.1	588.8	589.5	589.8
127.5°	626.0	627.4	628.7	630.0	631.3	632.4	633.1	634.0	634.7	635.5	636.0
130°	654.3	655.6	657.0	658.3	659.6	660.5	661.2	661.9	662.5	663.2	663.8
132.5°	681.5	682.8	684.1	685.4	686.7	687.6	688.2	688.6	689.2	689.8	690.4
135°	722.8	723.9	724.8	725.9	726.8	727.6	728.3	729.0	729.6	730.3	730.8
137.5°	758.3	759.5	760.7	762.0	763.2	764.0	764.4	764.8	765.1	765.4	766.3
140°	781.8	782.8	783.8	784.8	785.8	786.5	787.0	787.5	788.0	788.4	789.1
142.5°	803.6	804.6	805.6	806.6	807.6	808.3	808.8	809.3	809.7	810.3	810.8
145°	834.2	835.3	836.4	837.5	838.8	839.4	839.8	840.1	840.5	840.7	841.1
147.5°	862.9	863.7	864.4	865.2	865.9	866.5	866.8	867.0	867.4	867.7	868.1
150°	880.5	881.1	881.6	882.0	882.5	883.0	883.3	883.6	883.9	884.3	884.6
152.5°	896.5	896.7	896.9	897.2	897.4	897.6	897.8	898.0	898.2	898.4	899.0
155°	918.9	918.6	918.2	917.9	917.6	917.5	917.7	917.8	917.9	918.1	919.0
157.5°	936.2	936.2	936.2	936.1	936.1	936.0	935.9	935.8	935.6	935.4	936.4
160°	946.9	946.7	946.6	946.4	946.2	946.0	945.9	945.7	945.6	945.4	946.4
162.5°	956.9	956.5	956.0	955.6	955.2	954.9	954.7	954.6	954.4	954.2	955.4
165°	969.0	968.5	968.0	967.5	967.0	966.7	966.6	966.4	966.2	966.0	967.3
167.5°	978.5	977.8	977.1	976.5	975.8	975.4	975.4	975.4	975.4	975.4	976.8
170°	983.7	983.1	982.4	981.8	981.1	980.8	980.8	980.8	980.8	980.8	982.1
172.5°	987.2	986.5	985.7	984.9	984.1	983.8	983.9	984.0	984.2	984.3	985.6
175°	991.8	991.0	990.2	989.4	988.5	988.3	988.4	988.5	988.7	988.9	990.0
177.5°	993.0	992.4	991.7	991.1	990.4	990.1	990.2	990.4	990.5	990.6	991.7
180°	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8



TEST NUMBER: P332315-830

CATALOG NUMBER: S123RDIP-S775D805U830-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9
2.5°	1212.0	1214.0	1215.9	1216.7	1216.4	1216.0	1215.6	1215.3
5°	1204.0	1206.0	1208.0	1208.7	1208.3	1207.9	1207.4	1207.0
7.5°	1187.1	1188.2	1189.3	1189.5	1188.7	1188.0	1187.2	1186.5
10°	1172.0	1172.1	1172.3	1172.0	1170.8	1169.7	1168.7	1167.5
12.5°	1153.0	1152.9	1152.8	1152.1	1150.8	1149.5	1148.3	1147.0
15°	1119.9	1118.8	1117.8	1116.4	1114.9	1113.3	1111.8	1110.3
17.5°	1080.3	1078.1	1075.7	1073.5	1071.1	1068.8	1066.6	1064.3
20°	1053.3	1050.4	1047.5	1044.8	1042.2	1039.5	1036.9	1034.3
22.5°	1024.3	1020.7	1017.1	1014.1	1011.6	1009.2	1006.7	1004.3
25°	976.8	972.1	967.5	964.0	961.6	959.1	956.8	954.3
27.5°	924.9	918.6	912.2	907.1	903.4	899.8	896.1	892.4
30°	888.2	880.6	873.2	867.7	864.2	860.7	857.1	853.7
32.5°	852.0	843.9	835.7	829.7	826.0	822.4	818.7	815.0
35°	798.3	788.9	779.5	772.8	768.8	764.9	760.9	757.0
37.5°	740.6	730.0	719.3	711.5	706.6	701.7	696.9	692.0
40°	700.6	689.2	677.8	669.6	664.5	659.5	654.4	649.4
42.5°	662.1	649.7	637.3	628.8	624.2	619.7	615.2	610.7
45°	605.7	593.1	580.6	571.7	566.5	561.2	556.0	550.7
47.5°	547.1	533.6	520.0	510.9	506.1	501.4	496.8	492.1
50°	507.7	494.1	480.5	471.2	466.2	461.1	456.1	451.0
52.5°	469.6	455.4	441.3	432.0	427.4	422.9	418.4	413.9
55°	412.7	400.0	387.3	378.7	374.4	369.9	365.6	361.2
57.5°	356.9	344.9	332.9	325.0	321.3	317.5	313.8	310.1
60°	321.7	309.9	298.0	290.3	286.5	282.8	279.1	275.3
62.5°	286.8	275.7	264.6	257.0	253.1	249.2	245.3	241.4
65°	237.0	226.3	215.6	209.0	206.6	204.2	201.8	199.3
67.5°	189.6	181.6	173.5	168.2	165.7	163.1	160.5	157.9
70°	160.3	152.6	145.0	140.0	137.5	135.1	132.7	130.3
72.5°	133.9	127.6	121.4	117.7	116.7	115.7	114.7	113.7
75°	100.2	98.0	95.9	94.5	94.1	93.7	93.2	92.7
77.5°	75.6	74.4	73.2	72.4	72.0	71.5	71.1	70.7
80°	60.9	60.2	59.6	59.0	58.5	58.2	57.7	57.2
82.5°	46.7	46.0	45.3	45.0	44.9	44.8	44.7	44.6
85°	26.8	26.3	25.9	25.6	25.6	25.6	25.6	25.6
87.5°	13.7	13.7	13.7	13.6	13.5	13.3	13.2	13.1
90°	19.0	19.6	20.3	20.8	21.1	21.5	21.8	22.1
92.5°	20.9	22.0	23.1	23.7	23.8	24.0	24.2	24.5
95°	25.2	26.3	27.4	28.0	28.0	28.0	28.0	28.0
97.5°	26.4	27.6	28.9	29.7	29.9	30.1	30.2	30.3
100°	27.0	28.3	29.6	30.3	30.4	30.6	30.8	30.9
102.5°	40.3	36.3	32.2	30.3	30.6	30.9	31.2	31.6
105°	103.4	74.5	45.4	31.1	31.5	31.8	32.1	32.4
107.5°	253.3	232.1	210.8	189.2	167.4	145.5	123.7	101.8
110°	321.5	316.1	310.8	296.3	272.9	249.5	226.0	202.6





TEST NUMBER: P332315-830

CATALOG NUMBER: S123RDIP-S775D805U830-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	369.7	369.8	369.9	367.4	362.5	357.5	352.6	347.7
115°	426.2	427.9	429.5	430.6	431.3	432.0	432.6	433.3
117.5°	477.5	478.8	480.0	480.8	481.0	481.1	481.2	481.4
120°	511.0	512.4	513.7	514.3	514.3	514.3	514.3	514.3
122.5°	543.8	544.8	545.7	546.2	546.4	546.5	546.7	546.8
125°	590.1	590.5	590.8	591.2	591.4	591.8	592.1	592.5
127.5°	636.5	637.1	637.5	637.6	637.3	637.1	636.7	636.4
130°	664.5	665.2	665.8	666.0	665.6	665.3	665.0	664.7
132.5°	691.0	691.6	692.3	692.4	692.0	691.5	691.1	690.6
135°	731.2	731.7	732.2	732.2	731.7	731.2	730.8	730.3
137.5°	767.0	767.8	768.6	768.8	768.5	768.2	767.9	767.5
140°	789.8	790.4	791.1	791.3	790.9	790.6	790.2	789.9
142.5°	811.3	811.8	812.4	812.4	811.9	811.4	811.1	810.6
145°	841.4	841.8	842.1	842.3	842.3	842.3	842.3	842.3
147.5°	868.4	868.7	869.0	868.8	868.1	867.3	866.6	865.8
150°	884.9	885.2	885.5	885.5	885.0	884.5	884.0	883.5
152.5°	899.6	900.1	900.8	900.7	899.9	899.2	898.4	897.7
155°	919.8	920.6	921.4	921.3	920.4	919.4	918.4	917.4
157.5°	937.4	938.3	939.3	939.1	937.9	936.6	935.4	934.1
160°	947.3	948.4	949.3	949.2	948.1	947.0	945.8	944.7
162.5°	956.5	957.6	958.7	958.8	957.7	956.7	955.7	954.7
165°	968.7	970.0	971.3	971.4	970.3	969.0	967.9	966.8
167.5°	978.1	979.4	980.7	980.7	979.4	978.1	976.8	975.4
170°	983.4	984.7	986.0	986.0	984.7	983.4	982.1	980.8
172.5°	986.9	988.3	989.6	989.5	988.1	986.7	985.1	983.7
175°	991.2	992.3	993.4	993.3	992.1	990.8	989.5	988.2
177.5°	992.8	993.8	994.9	994.8	993.4	992.1	990.8	989.5
180°	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8

(END OF REPORT)