

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: P332311-940

Luminaire Tested: **S123RDIP-S775D585U940-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

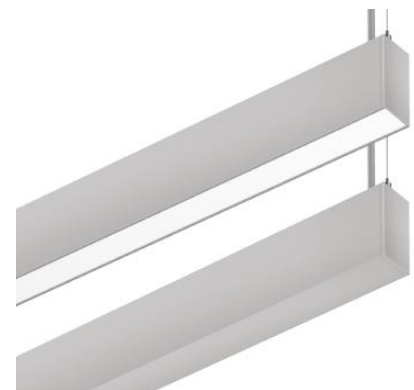
Test Information

Test Method: LM-79-08
Report Number: P332311-940
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: S123RDIP-S775D585U940-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4493.0 lumens
Efficiency: N/A
Efficacy: 111.5 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

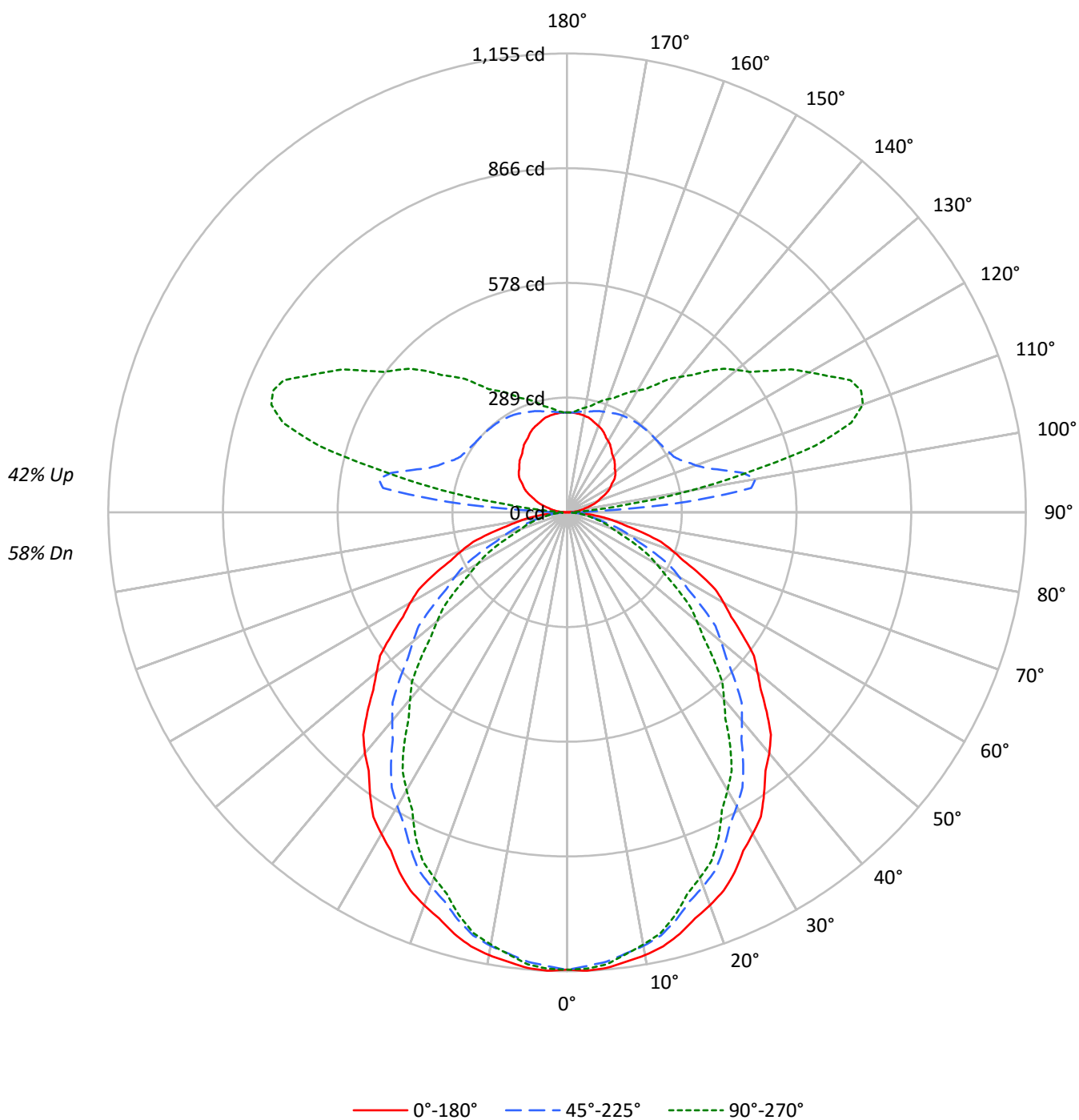
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332311-940

CATALOG NUMBER: S123RDIP-S775D585U940-4F0-1E-UDD-F4

Luminous Intensity Polar Plot



TEST NUMBER: P332311-940

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	109	109	109	109	102	102	102	102	88	88	88	75	75	75	63	63	63
1	100	96	92	88	93	89	86	83	78	75	73	67	65	63	57	55	54
2	91	84	78	73	85	79	73	69	68	64	61	59	56	53	50	48	46
3	84	74	67	61	78	69	63	58	61	56	52	52	49	46	45	42	40
4	77	66	58	52	71	62	55	49	54	49	44	47	43	39	40	37	35
5	70	59	51	45	66	55	48	43	49	43	39	42	38	34	37	33	30
6	65	53	45	39	61	50	43	37	44	38	34	38	34	30	33	30	27
7	60	48	40	35	56	45	38	33	40	34	30	35	30	27	30	27	24
8	56	44	36	31	52	41	34	29	37	31	27	32	28	24	28	24	22
9	52	40	33	28	49	38	31	26	34	28	24	30	25	22	26	22	20
10	49	37	30	25	46	35	28	24	31	26	22	27	23	20	24	21	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12392	12392	12392
5°	12440	12268	12338
10°	12369	12114	12073
15°	12237	11830	11705
20°	12054	11475	11208
25°	11866	11077	10723
30°	11616	10618	10038
35°	11361	10159	9410
40°	11126	9617	8633
45°	10816	9082	7931
50°	10474	8473	7145
55°	10128	7781	6412
60°	9810	7035	5608
65°	9393	6230	4804
70°	8875	5231	3877
75°	8114	4117	3647
80°	7234	3651	3353
85°	6113	3223	3001

TEST NUMBER: P332311-940

CATALOG NUMBER: S123RDIP-S775D585U940-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.1	2.4
10°-20°	300.8	6.7
20°-30°	433.1	9.6
30°-40°	487.9	10.9
40°-50°	466.7	10.4
50°-60°	382.2	8.5
60°-70°	257.9	5.7
70°-80°	129.7	2.9
80°-90°	36.3	0.8
90°-100°	139.8	3.1
100°-110°	395.9	8.8
110°-120°	389.5	8.7
120°-130°	310.7	6.9
130°-140°	244.9	5.5
140°-150°	182.8	4.1
150°-160°	127.4	2.8
160°-170°	74.9	1.7
170°-180°	24.4	0.5
0°-30°	842.0	18.7
0°-40°	1329.9	29.6
0°-60°	2178.8	48.5
0°-90°	2602.7	57.9
90°-120°	925.2	20.6
90°-150°	1663.7	37.0
90°-180°	1890.0	42.1
0°-180°	4493.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1151	1151	1151	1151	1151	
5°	1151	1146	1135	1143	1142	109
15°	1098	1087	1062	1057	1050	309
25°	999	975	933	914	903	459
35°	865	830	773	734	716	541
45°	710	667	597	545	521	548
55°	540	492	415	362	342	484
65°	369	316	245	201	189	365
75°	195	150	99	90	88	208
85°	50	30	26	24	24	56
90°	1	6	13	14	15	4
95°	17	56	302	88	59	19
105°	59	87	409	715	647	63
115°	104	130	313	686	787	103
125°	145	171	292	529	620	129
135°	170	203	288	436	503	131
145°	194	222	284	357	393	121
155°	220	238	275	313	326	101
165°	241	247	264	279	284	68
175°	251	251	253	256	256	24
180°	251	251	251	251	251	

TEST NUMBER: P332311-940

CATALOG NUMBER: S123RDIP-S775D585U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3
2.5°	1154.9	1154.3	1153.6	1153.0	1152.4	1151.0	1149.0	1147.0	1145.0	1143.0	1144.9
5°	1151.3	1150.2	1149.1	1148.2	1147.1	1145.3	1142.8	1140.3	1137.8	1135.4	1137.2
7.5°	1140.6	1139.5	1138.4	1137.2	1136.1	1133.9	1130.7	1127.5	1124.3	1121.0	1122.0
10°	1131.7	1130.2	1128.7	1127.3	1125.8	1123.2	1119.5	1115.8	1112.1	1108.3	1108.5
12.5°	1118.9	1117.3	1115.7	1114.1	1112.5	1109.4	1104.8	1100.3	1095.6	1091.1	1091.0
15°	1098.1	1095.7	1093.4	1091.2	1088.9	1084.9	1079.1	1073.3	1067.4	1061.6	1060.6
17.5°	1071.7	1069.1	1066.4	1063.7	1061.0	1056.1	1048.7	1041.3	1033.8	1026.5	1024.3
20°	1052.3	1048.9	1045.6	1042.3	1039.0	1033.4	1025.5	1017.6	1009.8	1001.8	999.2
22.5°	1030.6	1026.8	1023.0	1019.1	1015.3	1009.2	1000.9	992.5	984.1	975.7	972.3
25°	999.1	993.9	988.6	983.5	978.3	970.9	961.4	951.8	942.3	932.7	928.4
27.5°	960.7	955.0	949.3	943.6	937.9	929.7	919.1	908.5	897.8	887.2	881.1
30°	934.6	928.4	922.2	916.0	909.7	900.8	889.2	877.5	865.9	854.3	847.3
32.5°	908.5	901.4	894.4	887.3	880.3	870.6	858.3	846.1	833.7	821.4	813.8
35°	864.6	857.1	849.6	842.2	834.7	824.6	811.7	798.8	786.0	773.1	764.2
37.5°	820.2	811.8	803.5	795.2	786.9	776.0	762.2	748.5	734.8	721.0	710.9
40°	791.8	782.7	773.5	764.4	755.3	743.3	728.6	713.9	699.1	684.4	673.6
42.5°	759.6	750.6	741.4	732.3	723.2	711.0	695.7	680.5	665.3	650.1	638.3
45°	710.5	701.2	691.9	682.5	673.2	660.6	644.5	628.6	612.6	596.6	584.8
47.5°	661.5	651.2	641.0	630.7	620.5	607.3	591.4	575.3	559.4	543.4	530.6
50°	625.5	615.8	606.1	596.3	586.6	573.3	556.5	539.7	522.9	506.0	493.2
52.5°	593.4	582.9	572.3	561.7	551.2	537.5	520.8	504.3	487.6	470.9	457.6
55°	539.7	529.5	519.3	509.2	499.0	485.1	467.4	449.9	432.2	414.6	402.5
57.5°	490.0	478.9	467.9	456.7	445.7	431.3	413.6	395.8	378.1	360.4	349.0
60°	455.7	444.3	432.8	421.4	410.0	395.7	378.4	361.2	344.0	326.8	315.6
62.5°	421.2	409.8	398.4	387.0	375.7	361.3	344.1	326.9	309.7	292.4	281.9
65°	368.8	357.4	346.0	334.6	323.2	309.3	293.2	277.0	260.8	244.6	234.4
67.5°	316.4	304.8	293.3	281.7	270.2	256.6	241.1	225.6	210.1	194.6	187.0
70°	282.0	270.8	259.6	248.3	237.2	224.3	209.7	195.3	180.7	166.2	158.9
72.5°	247.6	236.6	225.5	214.5	203.5	191.4	178.2	165.0	151.8	138.6	132.6
75°	195.1	185.2	175.2	165.2	155.3	144.6	133.2	121.8	110.4	99.0	96.9
77.5°	147.3	138.3	129.3	120.3	111.3	103.2	95.8	88.5	81.1	73.7	72.7
80°	116.7	108.2	99.7	91.2	82.7	76.2	71.9	67.5	63.2	58.9	58.2
82.5°	87.6	80.3	72.9	65.5	58.2	53.5	51.5	49.4	47.4	45.4	44.8
85°	49.5	44.9	40.4	35.8	31.2	28.6	28.0	27.4	26.8	26.1	25.8
87.5°	18.1	16.5	14.9	13.4	11.8	11.1	11.3	11.7	11.9	12.2	11.9
90°	1.0	2.1	3.0	4.5	5.6	6.6	8.1	9.6	11.1	12.8	12.2
92.5°	6.3	9.4	13.6	17.6	21.8	29.4	42.7	64.6	86.1	78.2	59.0
95°	17.3	18.8	24.4	33.1	46.3	66.1	109.3	185.1	268.6	301.6	244.6
97.5°	29.5	30.1	34.4	41.9	54.9	76.4	117.7	203.1	342.1	467.4	500.1
100°	37.6	38.2	41.7	48.9	61.0	80.9	116.5	191.7	325.5	481.6	581.8
102.5°	46.2	47.1	50.3	57.0	67.9	86.1	118.1	182.0	301.1	455.2	585.9
105°	59.0	60.5	63.6	69.6	79.4	95.1	122.6	175.0	271.1	408.9	554.9
107.5°	72.6	74.2	77.1	83.1	92.2	106.8	130.9	174.4	252.0	368.0	500.6
110°	82.4	83.9	86.5	92.0	100.7	114.9	137.9	176.5	244.6	344.8	466.4

TEST NUMBER: P332311-940

CATALOG NUMBER: S123RDIP-S775D585U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	91.3	92.9	95.4	101.0	109.7	123.5	144.7	180.6	240.6	329.4	436.7
115°	104.2	106.3	109.3	114.4	123.1	136.8	156.1	187.2	239.1	312.8	400.8
117.5°	117.2	119.5	122.1	126.7	136.4	149.1	168.3	195.9	240.0	303.0	379.2
120°	126.2	127.7	130.2	135.3	145.0	157.7	175.9	202.4	241.6	298.5	367.7
122.5°	133.8	135.4	137.9	143.4	152.7	166.2	184.1	208.6	244.4	295.7	358.4
125°	145.0	146.0	149.0	154.6	164.3	178.0	195.8	218.2	248.7	291.9	346.3
127.5°	153.4	154.9	158.7	164.3	175.0	188.8	206.0	226.1	253.6	290.1	335.8
130°	158.7	160.2	164.8	170.9	181.6	195.3	212.0	231.4	256.8	288.9	330.1
132.5°	162.7	164.7	169.7	177.0	187.7	201.0	217.4	236.3	259.3	288.5	324.8
135°	169.9	171.9	177.5	185.1	195.8	209.6	225.3	242.6	263.0	287.8	317.9
137.5°	176.6	178.7	184.2	192.3	203.0	215.6	230.8	247.3	265.4	286.8	311.9
140°	181.1	183.6	188.7	196.8	207.0	219.7	234.4	249.8	267.0	286.3	308.2
142.5°	185.9	188.1	193.6	200.9	211.1	223.0	237.3	252.2	268.2	285.5	305.0
145°	193.8	195.3	199.9	207.5	216.2	227.8	241.1	254.9	269.0	284.3	300.6
147.5°	201.7	202.6	207.1	213.7	222.0	232.0	244.2	256.5	269.0	282.4	296.3
150°	207.0	207.5	211.6	218.2	225.3	234.4	246.2	256.8	269.0	280.7	293.5
152.5°	212.3	212.4	216.5	222.3	228.5	237.3	247.4	257.7	267.9	278.7	290.3
155°	220.3	220.3	223.3	228.4	234.0	241.1	249.8	257.9	266.5	275.2	285.3
157.5°	226.5	226.9	229.3	233.9	238.6	244.2	251.0	258.4	264.7	272.0	279.8
160°	231.4	231.4	233.4	237.6	241.1	246.2	252.3	258.4	263.9	269.6	276.2
162.5°	235.1	235.1	236.7	240.0	243.1	247.4	252.7	258.0	262.3	267.2	272.5
165°	240.6	240.0	241.1	243.6	245.7	249.2	253.2	256.8	259.9	263.5	267.5
167.5°	244.8	244.2	244.6	246.6	248.0	250.2	253.2	256.0	257.4	259.8	262.8
170°	247.2	246.2	246.6	248.2	249.2	250.2	252.8	254.9	255.8	257.3	259.9
172.5°	248.8	248.2	248.3	249.4	250.0	250.7	252.8	254.4	254.6	255.3	257.1
175°	250.7	250.2	249.8	250.7	250.7	251.3	252.3	253.2	252.8	252.8	253.8
177.5°	251.6	251.3	250.8	251.3	251.3	251.3	251.6	252.4	251.6	251.3	251.6
180°	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3

TEST NUMBER: P332311-940

CATALOG NUMBER: S123RDIP-S775D585U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3
2.5°	1146.7	1148.5	1150.3	1151.1	1150.8	1150.4	1150.0	1149.8
5°	1139.1	1140.9	1142.8	1143.5	1143.2	1142.7	1142.3	1141.9
7.5°	1123.1	1124.1	1125.2	1125.3	1124.6	1123.9	1123.2	1122.5
10°	1108.8	1108.9	1109.1	1108.8	1107.7	1106.6	1105.6	1104.6
12.5°	1090.8	1090.7	1090.7	1089.9	1088.8	1087.5	1086.4	1085.1
15°	1059.5	1058.5	1057.5	1056.2	1054.8	1053.3	1051.9	1050.4
17.5°	1022.1	1019.9	1017.7	1015.6	1013.3	1011.2	1009.1	1006.9
20°	996.5	993.7	991.0	988.5	986.0	983.5	981.0	978.5
22.5°	969.0	965.6	962.2	959.4	957.1	954.8	952.4	950.1
25°	924.1	919.7	915.3	912.0	909.7	907.4	905.2	902.9
27.5°	875.0	869.1	863.0	858.2	854.7	851.2	847.7	844.3
30°	840.3	833.1	826.1	820.9	817.6	814.3	810.9	807.6
32.5°	806.0	798.3	790.6	785.0	781.5	778.0	774.5	771.1
35°	755.3	746.4	737.4	731.1	727.4	723.6	719.9	716.1
37.5°	700.7	690.6	680.5	673.2	668.5	663.9	659.3	654.7
40°	662.8	652.0	641.2	633.5	628.7	623.9	619.1	614.4
42.5°	626.4	614.7	602.9	594.9	590.6	586.3	582.0	577.7
45°	573.0	561.2	549.3	540.9	535.9	530.9	526.0	521.0
47.5°	517.6	504.8	492.0	483.3	478.8	474.4	470.0	465.6
50°	480.4	467.4	454.6	445.8	441.0	436.2	431.5	426.7
52.5°	444.3	430.9	417.5	408.7	404.4	400.1	395.8	391.6
55°	390.5	378.4	366.4	358.3	354.2	350.0	345.9	341.7
57.5°	337.7	326.3	315.0	307.5	304.0	300.4	296.9	293.4
60°	304.3	293.2	282.0	274.6	271.1	267.5	264.0	260.5
62.5°	271.3	260.8	250.3	243.2	239.4	235.8	232.1	228.4
65°	224.3	214.1	203.9	197.7	195.5	193.1	190.9	188.6
67.5°	179.4	171.8	164.2	159.2	156.8	154.3	151.9	149.4
70°	151.7	144.4	137.1	132.4	130.1	127.8	125.6	123.2
72.5°	126.7	120.7	114.9	111.4	110.4	109.5	108.5	107.5
75°	94.8	92.7	90.7	89.4	89.0	88.6	88.2	87.7
77.5°	71.5	70.4	69.3	68.5	68.1	67.7	67.2	66.9
80°	57.6	57.0	56.4	55.8	55.4	55.0	54.6	54.1
82.5°	44.1	43.5	42.9	42.5	42.4	42.4	42.3	42.2
85°	25.3	24.9	24.5	24.3	24.3	24.3	24.3	24.3
87.5°	11.9	11.9	11.8	11.9	11.6	11.5	11.4	11.1
90°	12.8	13.2	13.7	14.7	14.3	14.7	15.2	14.7
92.5°	42.8	34.0	30.1	27.4	26.5	24.9	25.4	24.5
95°	183.1	124.1	97.1	78.8	69.2	64.6	61.0	59.0
97.5°	456.5	365.6	300.0	239.2	201.6	178.7	165.0	160.6
100°	599.7	558.5	498.9	426.7	375.3	338.2	318.4	318.9
102.5°	647.3	646.0	611.3	565.4	525.5	496.1	479.5	467.8
105°	661.2	712.0	721.8	708.5	685.1	665.8	649.5	646.9
107.5°	621.1	703.7	748.2	766.3	766.8	760.3	754.7	750.1
110°	582.8	676.5	740.6	776.1	790.4	794.4	793.4	792.4

TEST NUMBER: P332311-940

CATALOG NUMBER: S123RDIP-S775D585U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	545.0	640.6	712.5	758.2	784.3	796.9	800.8	800.9
115°	494.9	583.4	658.2	713.5	751.7	774.1	784.3	786.8
117.5°	458.5	534.9	602.1	658.4	698.1	723.7	738.4	741.8
120°	439.4	508.1	569.1	620.5	660.7	689.2	701.3	704.5
122.5°	424.4	486.5	543.1	590.8	626.5	652.1	665.6	669.4
125°	404.3	459.8	508.6	549.3	581.8	604.2	617.0	620.5
127.5°	386.8	436.3	480.4	517.4	546.4	565.4	576.9	580.2
130°	375.9	421.6	462.8	497.4	524.4	542.7	553.4	557.4
132.5°	365.7	407.8	446.1	479.1	504.4	522.7	532.2	535.0
135°	352.0	388.1	421.2	450.1	475.0	490.3	499.4	503.0
137.5°	339.5	369.1	397.5	422.7	443.6	459.1	466.8	469.1
140°	332.2	358.0	382.5	404.3	423.7	437.9	446.0	445.5
142.5°	325.2	347.5	368.6	387.6	404.1	416.8	424.1	423.6
145°	316.8	333.7	349.9	364.7	377.4	388.1	392.2	393.2
147.5°	310.0	323.3	336.5	347.0	356.6	363.8	367.7	368.1
150°	305.1	316.8	327.5	337.2	344.8	350.4	353.5	353.5
152.5°	300.7	310.8	320.2	328.2	334.2	339.5	341.3	341.3
155°	294.0	302.1	309.8	315.8	320.4	324.5	325.5	326.0
157.5°	286.9	293.6	299.6	304.3	308.4	311.4	312.2	312.1
160°	282.8	288.4	293.5	297.0	300.6	303.6	303.6	303.1
162.5°	277.9	282.7	287.4	290.5	292.8	295.5	295.5	295.0
165°	271.6	274.6	278.2	280.7	282.8	284.8	284.3	284.3
167.5°	266.1	268.4	270.5	272.3	273.2	274.6	274.1	274.1
170°	262.4	263.9	266.0	267.0	267.5	268.6	268.0	268.0
172.5°	259.2	260.3	261.9	262.5	262.6	263.7	262.8	262.3
175°	254.9	255.3	256.4	256.4	256.4	256.8	256.4	255.8
177.5°	252.1	252.4	252.9	252.9	252.4	252.9	252.1	252.1
180°	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3

(END OF REPORT)