

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: P332316-940

Luminaire Tested: **S123RDIP-S775D805U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332316-940
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-S775D805U940-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5062.4 lumens
Efficiency: N/A
Efficacy: 110.3 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

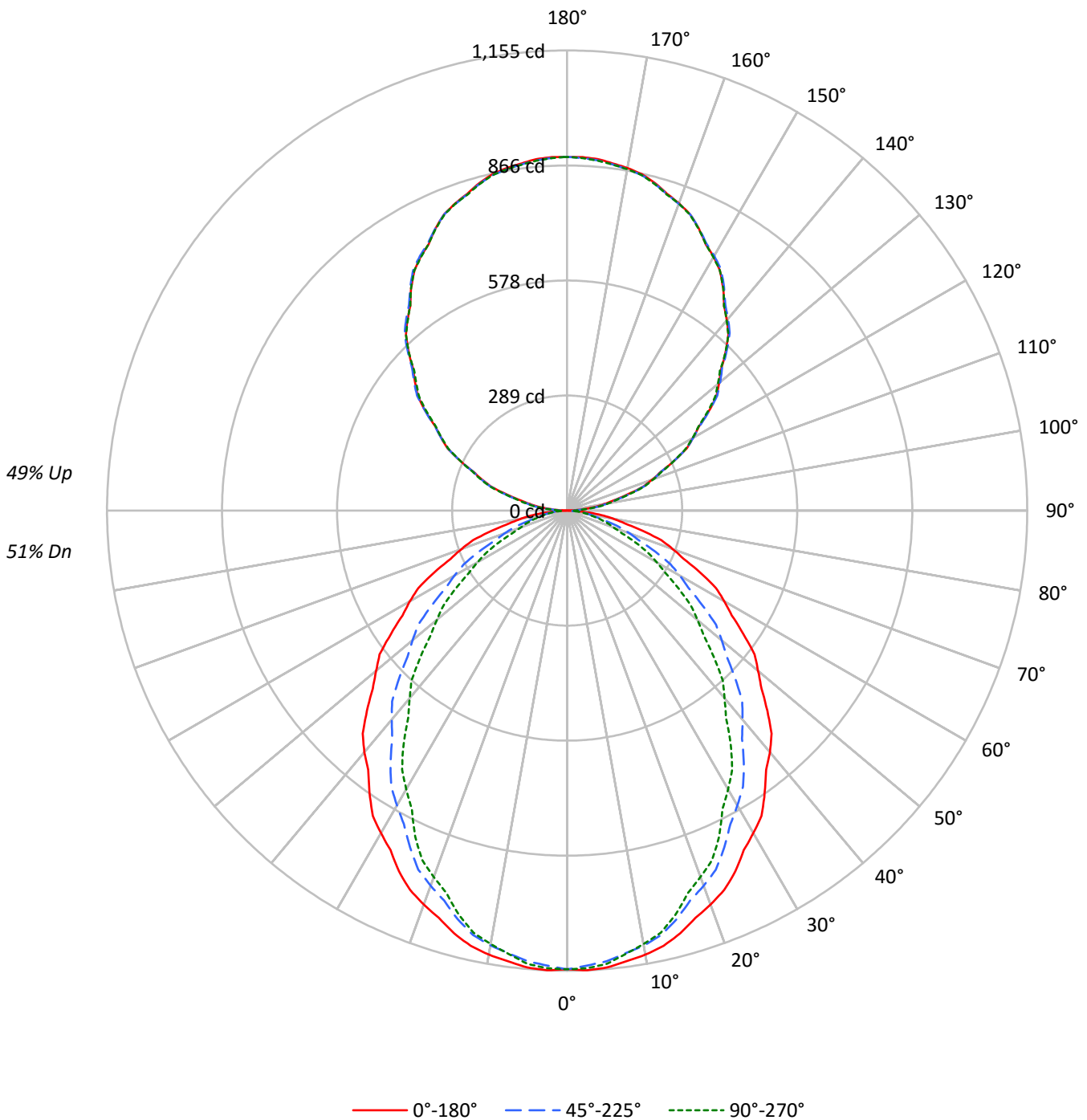
Input Watts (W): 45.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332316-940

CATALOG NUMBER: S123RDIP-S775D805U940-4F0-1E-UDD-F1

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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	98	94	90	87	91	87	84	81	74	72	70	62	61	59	51	50	49	44
2	90	83	77	72	83	77	71	67	65	62	58	55	52	50	46	44	42	37
3	82	73	66	60	76	68	61	56	58	53	49	49	46	43	41	38	36	32
4	75	65	57	51	69	60	53	48	52	46	42	44	40	37	36	34	31	28
5	69	58	50	44	64	54	47	42	46	41	37	39	35	32	33	30	27	24
6	64	52	44	38	59	49	41	36	42	36	32	36	31	28	30	27	24	21
7	59	47	39	34	55	44	37	32	38	33	28	33	28	25	28	24	22	19
8	55	43	35	30	51	40	33	28	35	29	25	30	26	22	25	22	20	17
9	51	39	32	27	47	37	30	25	32	27	23	28	23	20	23	20	18	16
10	48	36	29	24	44	34	27	23	30	24	21	26	21	18	22	19	16	14

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: P332316-940

CATALOG NUMBER: S123RDIP-S775D805U940-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.1	2.1
10°-20°	300.8	5.9
20°-30°	433.1	8.6
30°-40°	487.9	9.6
40°-50°	466.7	9.2
50°-60°	382.2	7.6
60°-70°	257.9	5.1
70°-80°	129.7	2.6
80°-90°	37.0	0.7
90°-100°	57.8	1.1
100°-110°	173.1	3.4
110°-120°	294.3	5.8
120°-130°	387.1	7.6
130°-140°	435.1	8.6
140°-150°	427.7	8.4
150°-160°	360.1	7.1
160°-170°	239.7	4.7
170°-180°	83.9	1.7
0°-30°	842.0	16.6
0°-40°	1329.9	26.3
0°-60°	2178.8	43.0
0°-90°	2603.4	51.4
90°-120°	525.2	10.4
90°-150°	1775.2	35.1
90°-180°	2459.0	48.6
0°-180°	5062.4	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	8	17	19	21	5
95°	41	46	52	54	54	46
105°	157	159	164	165	166	168
115°	296	298	297	298	297	293
125°	434	436	434	432	429	387
135°	563	567	566	563	562	433
145°	682	684	686	685	682	426
155°	782	782	782	785	780	360
165°	851	849	849	853	848	240
175°	885	883	883	886	882	84
180°	888	888	888	888	888	



TEST NUMBER: P332316-940

CATALOG NUMBER: S123RDIP-S775D805U940-4F0-1E-UDD-F1

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	16.6	15.1	13.6	12.0	11.4	11.9	12.2	12.7	13.0	13.0
90°	0.7	2.2	3.8	5.4	6.9	8.6	10.7	12.7	14.7	16.8	17.4
92.5°	16.9	17.9	19.0	20.1	21.0	22.2	23.4	24.5	25.6	26.8	27.3
95°	41.1	42.2	43.3	44.4	45.5	46.6	47.9	49.1	50.4	51.6	52.3
97.5°	73.0	73.8	74.6	75.4	76.3	77.1	78.0	78.9	79.8	80.7	81.4
100°	94.8	95.8	96.7	97.6	98.5	99.4	100.1	100.9	101.7	102.5	103.0
102.5°	119.9	120.5	121.0	121.6	122.2	123.0	123.9	125.0	126.0	127.1	127.5
105°	156.9	157.2	157.5	157.8	158.1	159.0	160.3	161.8	163.2	164.5	164.5
107.5°	199.8	200.0	200.2	200.4	200.5	200.9	201.5	202.1	202.6	203.1	203.7
110°	226.6	226.9	227.2	227.5	227.8	228.1	228.5	228.7	229.1	229.3	230.0



TEST NUMBER: P332316-940

CATALOG NUMBER: S123RDIP-S775D805U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	254.5	254.7	254.9	255.0	255.2	255.3	255.4	255.5	255.6	255.6	256.4
115°	296.3	296.8	297.2	297.7	298.2	298.3	297.9	297.7	297.3	297.0	297.1
117.5°	338.4	338.8	339.0	339.3	339.7	339.6	339.2	338.8	338.4	338.0	338.0
120°	364.6	365.5	366.5	367.4	368.4	368.5	367.7	366.8	366.1	365.3	365.2
122.5°	392.0	392.6	393.3	394.0	394.7	394.8	394.4	394.0	393.6	393.2	392.8
125°	433.6	434.1	434.5	435.1	435.5	435.6	435.2	435.0	434.6	434.4	433.7
127.5°	472.2	473.1	474.1	475.1	476.1	476.4	476.1	475.7	475.4	475.0	474.2
130°	497.8	499.0	500.2	501.5	502.7	503.1	502.7	502.2	501.8	501.2	500.6
132.5°	523.4	524.7	525.9	527.2	528.4	528.9	528.5	528.2	527.8	527.4	526.7
135°	562.6	563.6	564.5	565.4	566.3	566.8	566.6	566.4	566.2	566.1	565.5
137.5°	598.9	599.7	600.4	601.2	602.0	602.5	603.0	603.3	603.8	604.1	603.5
140°	623.9	624.7	625.5	626.3	627.1	627.5	627.7	627.9	628.0	628.1	628.0
142.5°	646.8	647.6	648.4	649.2	650.0	650.5	650.8	651.0	651.3	651.6	651.4
145°	682.5	682.9	683.1	683.5	683.8	684.1	684.7	685.1	685.5	686.0	685.9
147.5°	713.8	714.3	714.9	715.4	716.0	716.5	716.9	717.4	717.8	718.3	718.3
150°	735.5	735.8	736.1	736.5	736.7	737.1	737.4	737.7	738.0	738.3	738.3
152.5°	753.4	753.8	754.2	754.7	755.1	755.5	755.6	755.8	756.0	756.2	756.4
155°	781.5	781.5	781.5	781.5	781.5	781.6	781.8	781.9	782.1	782.2	782.8
157.5°	805.5	805.3	805.1	804.9	804.8	804.8	804.9	805.0	805.1	805.2	805.9
160°	820.6	820.3	819.9	819.7	819.3	819.2	819.2	819.2	819.2	819.2	819.9
162.5°	833.9	833.6	833.1	832.7	832.2	832.1	832.2	832.3	832.4	832.6	833.3
165°	851.2	850.8	850.3	849.9	849.4	849.2	849.2	849.2	849.2	849.2	850.1
167.5°	865.0	864.4	863.8	863.2	862.6	862.4	862.5	862.6	862.7	862.8	863.8
170°	872.9	872.3	871.6	871.0	870.4	870.0	870.0	870.0	870.0	870.0	871.2
172.5°	879.0	878.4	877.8	877.2	876.6	876.2	876.2	876.2	876.2	876.2	877.2
175°	885.4	884.8	884.2	883.6	883.0	882.6	882.6	882.6	882.6	882.6	883.6
177.5°	888.1	887.6	887.1	886.5	886.1	885.8	885.8	885.8	885.8	885.8	886.5
180°	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5



TEST NUMBER: P332316-940

CATALOG NUMBER: S123RDIP-S775D805U940-4F0-1E-UDD-F1

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°	12.9	12.9	12.9	12.8	12.8	12.6	12.5	12.4
90°	18.0	18.5	19.2	19.7	20.0	20.3	20.6	21.0
92.5°	27.7	28.3	28.7	28.9	28.7	28.5	28.4	28.2
95°	52.8	53.4	54.0	54.4	54.4	54.4	54.4	54.4
97.5°	82.1	82.8	83.6	83.9	83.8	83.8	83.7	83.6
100°	103.4	103.9	104.3	104.8	105.0	105.3	105.7	105.9
102.5°	128.0	128.4	128.9	129.1	129.0	128.9	128.9	128.9
105°	164.5	164.5	164.5	164.7	165.0	165.3	165.6	165.9
107.5°	204.1	204.6	205.2	205.3	205.1	204.9	204.7	204.6
110°	230.6	231.2	231.8	232.0	231.7	231.4	231.0	230.8



TEST NUMBER: P332316-940

CATALOG NUMBER: S123RDIP-S775D805U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	257.1	257.8	258.6	258.9	258.9	258.8	258.7	258.7
115°	297.3	297.5	297.7	297.7	297.5	297.3	297.1	297.0
117.5°	338.0	337.9	337.9	337.6	337.2	336.8	336.4	335.9
120°	365.0	364.9	364.7	364.4	364.2	363.8	363.6	363.2
122.5°	392.4	392.0	391.6	391.2	390.7	390.3	389.9	389.4
125°	433.1	432.5	431.9	431.2	430.6	430.0	429.4	428.7
127.5°	473.3	472.4	471.6	470.8	470.1	469.4	468.7	468.0
130°	500.1	499.4	498.8	497.9	496.9	495.8	494.7	493.6
132.5°	526.0	525.2	524.5	523.7	522.9	522.0	521.2	520.4
135°	564.9	564.3	563.7	563.2	562.8	562.6	562.2	562.0
137.5°	602.9	602.3	601.5	600.9	600.4	599.8	599.2	598.6
140°	627.9	627.7	627.5	627.0	625.8	624.7	623.7	622.6
142.5°	651.3	651.1	650.9	650.5	649.6	648.8	647.9	647.1
145°	685.7	685.5	685.4	685.0	684.4	683.8	683.1	682.5
147.5°	718.3	718.3	718.3	717.7	716.8	715.9	715.0	714.1
150°	738.3	738.3	738.3	737.9	736.9	736.0	735.0	734.1
152.5°	756.6	756.9	757.2	756.9	756.1	755.3	754.5	753.7
155°	783.5	784.1	784.7	784.4	783.4	782.3	781.2	780.2
157.5°	806.6	807.2	807.8	807.7	806.9	806.0	805.1	804.2
160°	820.7	821.5	822.2	822.3	821.7	821.1	820.5	819.8
162.5°	834.1	834.9	835.7	835.5	834.6	833.6	832.6	831.6
165°	851.0	851.9	852.9	852.8	851.8	850.6	849.5	848.5
167.5°	864.8	865.7	866.7	866.7	865.7	864.8	863.8	862.8
170°	872.3	873.3	874.4	874.4	873.3	872.3	871.2	870.0
172.5°	878.2	879.1	880.0	880.0	878.9	877.8	876.7	875.7
175°	884.5	885.4	886.4	886.3	885.2	884.1	883.0	881.9
177.5°	887.3	888.1	888.8	888.8	887.9	887.0	886.2	885.3
180°	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5

(END OF REPORT)