

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: P332304-940

Luminaire Tested: **S123RDIP-S775D365U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332304-940  
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-S775D365U940-4F0-1E-UDD-F1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3713.4 lumens  
Efficiency: N/A  
Efficacy: 106.1 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

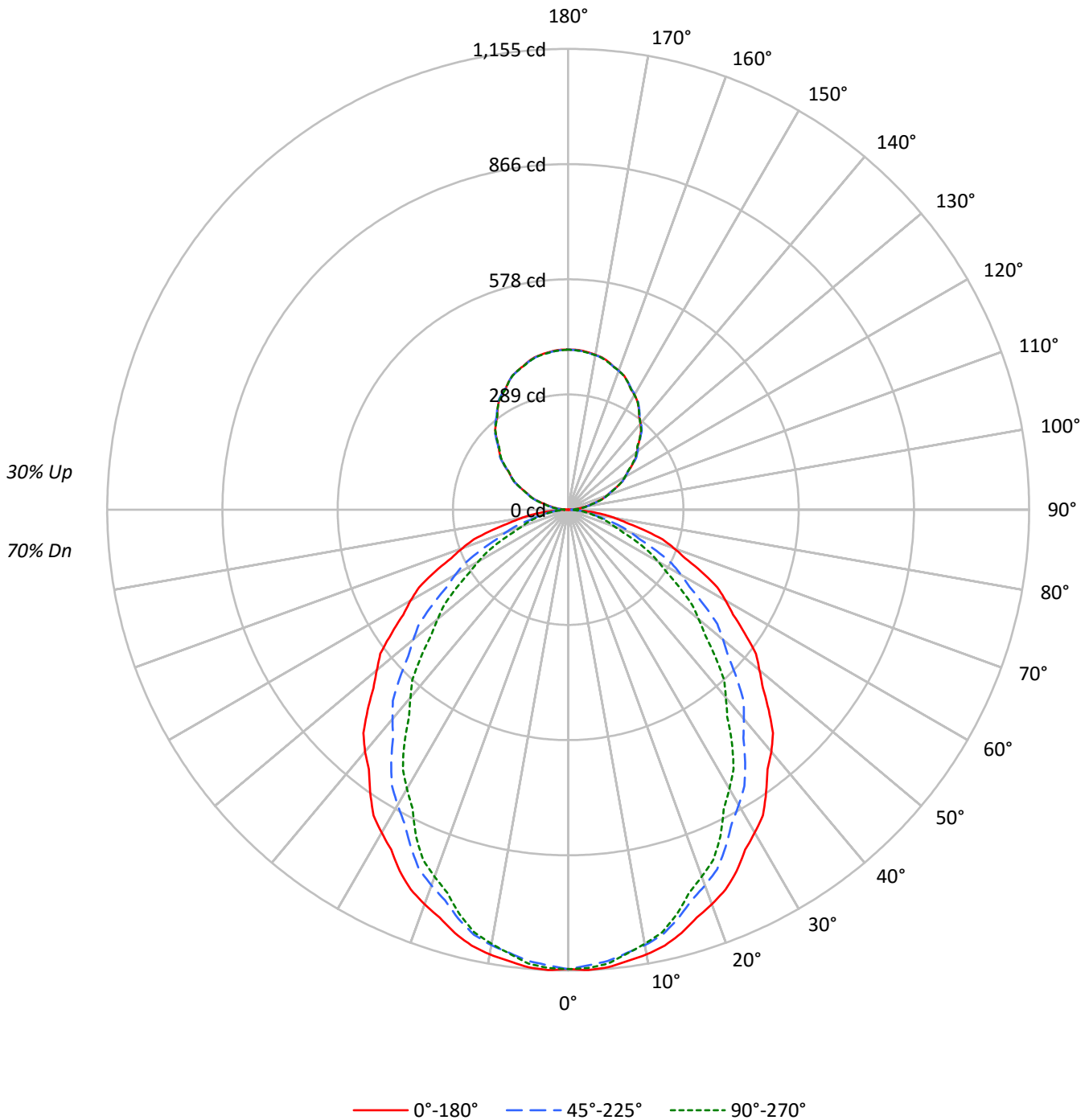
Input Watts (W): 35  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	112	112	112	112	106	106	106	106	94	94	94	84	84	84	75	75	75	70
1	103	98	95	91	97	93	90	87	84	81	79	75	73	71	67	65	64	60
2	94	87	80	75	89	82	77	72	74	70	66	66	63	60	59	57	55	51
3	86	77	69	63	81	73	66	61	66	60	56	59	55	51	53	50	47	44
4	79	68	60	54	74	65	58	52	59	53	48	53	48	44	48	44	41	38
5	73	61	53	47	69	58	51	45	53	47	42	48	43	39	43	39	36	33
6	67	55	47	41	63	52	45	40	48	42	37	43	38	34	39	35	32	29
7	62	50	42	36	59	48	40	35	44	37	33	40	34	31	36	32	28	26
8	58	46	38	32	55	44	36	31	40	34	29	36	31	27	33	29	26	23
9	54	42	34	29	51	40	33	28	37	31	26	34	28	25	31	26	23	21
10	51	38	31	26	48	37	30	26	34	28	24	31	26	23	28	24	21	19

**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



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.1	2.9
10°-20°	300.8	8.1
20°-30°	433.1	11.7
30°-40°	487.9	13.1
40°-50°	466.7	12.6
50°-60°	382.2	10.3
60°-70°	257.9	6.9
70°-80°	129.7	3.5
80°-90°	35.5	1.0
90°-100°	26.1	0.7
100°-110°	78.2	2.1
110°-120°	133.0	3.6
120°-130°	175.0	4.7
130°-140°	196.7	5.3
140°-150°	193.3	5.2
150°-160°	162.8	4.4
160°-170°	108.3	2.9
170°-180°	37.9	1.0
0°-30°	842.0	22.7
0°-40°	1329.9	35.8
0°-60°	2178.8	58.7
0°-90°	2602.0	70.1
90°-120°	237.4	6.4
90°-150°	802.4	21.6
90°-180°	1111.0	29.9
0°-180°	3713.4	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°	0	4	8	9	10	4
95°	19	21	23	24	25	21
105°	71	72	74	74	75	76
115°	134	135	134	135	134	132
125°	196	197	196	195	194	175
135°	254	256	256	255	254	196
145°	308	309	310	310	308	193
155°	353	353	354	355	353	163
165°	385	384	384	386	384	108
175°	400	399	399	401	399	38
180°	401	401	401	401	401	



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**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°	18.0	16.3	14.6	12.9	11.2	10.5	10.7	10.9	11.1	11.2	11.1
90°	0.4	1.0	1.7	2.4	3.1	3.9	4.8	5.7	6.7	7.6	7.8
92.5°	7.7	8.1	8.6	9.1	9.5	10.0	10.5	11.1	11.6	12.1	12.3
95°	18.6	19.1	19.5	20.1	20.5	21.0	21.7	22.2	22.7	23.4	23.6
97.5°	33.0	33.3	33.8	34.2	34.5	34.9	35.3	35.7	36.1	36.5	36.8
100°	42.9	43.2	43.7	44.1	44.5	44.9	45.3	45.7	46.0	46.3	46.5
102.5°	54.2	54.5	54.7	54.9	55.2	55.6	56.0	56.5	57.0	57.4	57.6
105°	70.9	71.1	71.2	71.3	71.4	71.9	72.5	73.1	73.7	74.4	74.4
107.5°	90.3	90.4	90.5	90.6	90.7	90.8	91.0	91.3	91.6	91.8	92.0
110°	102.5	102.5	102.7	102.8	103.0	103.1	103.3	103.4	103.5	103.7	104.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	115.0	115.1	115.2	115.3	115.4	115.4	115.5	115.5	115.5	115.6	115.8
115°	133.9	134.1	134.4	134.6	134.7	134.8	134.6	134.6	134.4	134.2	134.3
117.5°	152.9	153.1	153.3	153.4	153.6	153.5	153.3	153.1	152.9	152.8	152.8
120°	164.8	165.2	165.7	166.0	166.5	166.5	166.2	165.9	165.5	165.1	165.1
122.5°	177.2	177.5	177.8	178.1	178.4	178.4	178.3	178.1	177.9	177.7	177.5
125°	196.0	196.2	196.4	196.6	196.9	196.9	196.7	196.6	196.4	196.4	196.0
127.5°	213.4	213.8	214.3	214.7	215.2	215.3	215.2	215.0	214.9	214.7	214.4
130°	225.0	225.5	226.1	226.7	227.2	227.4	227.2	227.0	226.8	226.6	226.3
132.5°	236.6	237.2	237.7	238.3	238.8	239.1	238.9	238.7	238.5	238.4	238.1
135°	254.3	254.8	255.1	255.6	256.0	256.2	256.1	256.0	255.9	255.9	255.6
137.5°	270.7	271.1	271.3	271.7	272.1	272.3	272.5	272.7	272.9	273.0	272.8
140°	282.0	282.4	282.8	283.1	283.5	283.7	283.7	283.7	283.8	283.9	283.8
142.5°	292.4	292.7	293.1	293.5	293.7	294.0	294.2	294.3	294.4	294.5	294.4
145°	308.5	308.6	308.8	308.9	309.1	309.2	309.4	309.7	309.9	310.0	310.0
147.5°	322.6	322.9	323.2	323.4	323.6	323.9	324.0	324.2	324.4	324.7	324.7
150°	332.4	332.6	332.7	332.9	333.1	333.1	333.3	333.4	333.6	333.7	333.7
152.5°	340.5	340.7	340.9	341.1	341.3	341.4	341.5	341.6	341.7	341.8	341.9
155°	353.3	353.3	353.3	353.3	353.3	353.3	353.4	353.4	353.5	353.6	353.8
157.5°	364.1	364.0	363.9	363.8	363.7	363.7	363.8	363.8	363.9	364.0	364.3
160°	370.9	370.8	370.6	370.5	370.3	370.2	370.2	370.2	370.2	370.2	370.6
162.5°	376.9	376.7	376.6	376.4	376.1	376.1	376.1	376.2	376.3	376.3	376.7
165°	384.8	384.6	384.3	384.1	383.9	383.8	383.8	383.8	383.8	383.8	384.2
167.5°	391.0	390.7	390.5	390.1	389.9	389.8	389.9	389.9	389.9	390.0	390.4
170°	394.5	394.2	394.0	393.7	393.4	393.2	393.2	393.2	393.2	393.2	393.8
172.5°	397.3	397.0	396.7	396.5	396.2	396.0	396.0	396.0	396.0	396.0	396.5
175°	400.2	399.9	399.7	399.4	399.1	399.0	399.0	399.0	399.0	399.0	399.4
177.5°	401.4	401.2	400.9	400.7	400.5	400.4	400.4	400.4	400.4	400.4	400.7
180°	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2



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**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°	11.0	10.9	10.8	10.7	10.5	10.3	10.3	10.1
90°	8.1	8.4	8.6	8.9	9.0	9.2	9.3	9.5
92.5°	12.6	12.8	13.0	13.1	13.0	12.9	12.8	12.8
95°	23.9	24.2	24.4	24.6	24.6	24.6	24.6	24.6
97.5°	37.1	37.5	37.8	37.9	37.9	37.9	37.8	37.8
100°	46.7	47.0	47.2	47.3	47.4	47.6	47.8	47.9
102.5°	57.9	58.1	58.2	58.3	58.3	58.3	58.2	58.2
105°	74.4	74.4	74.4	74.5	74.5	74.7	74.9	75.0
107.5°	92.3	92.5	92.7	92.8	92.7	92.6	92.6	92.5
110°	104.2	104.5	104.8	104.9	104.7	104.6	104.4	104.3





TEST NUMBER: P332304-940

CATALOG NUMBER: S123RDIP-S775D365U940-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	116.2	116.5	116.9	117.0	117.0	117.0	116.9	116.9
115°	134.4	134.5	134.6	134.6	134.5	134.4	134.3	134.2
117.5°	152.8	152.8	152.8	152.6	152.4	152.2	152.0	151.9
120°	165.0	164.9	164.9	164.7	164.6	164.4	164.3	164.2
122.5°	177.4	177.2	177.0	176.8	176.6	176.4	176.2	176.0
125°	195.7	195.5	195.2	194.9	194.7	194.4	194.0	193.8
127.5°	213.9	213.6	213.1	212.8	212.5	212.1	211.9	211.5
130°	226.0	225.7	225.4	225.1	224.6	224.1	223.6	223.1
132.5°	237.7	237.4	237.1	236.7	236.3	235.9	235.6	235.2
135°	255.3	255.0	254.8	254.6	254.4	254.2	254.1	254.0
137.5°	272.5	272.2	271.9	271.6	271.3	271.1	270.8	270.5
140°	283.7	283.7	283.7	283.4	282.9	282.4	281.9	281.4
142.5°	294.4	294.3	294.3	294.0	293.6	293.3	292.8	292.5
145°	310.0	309.9	309.8	309.6	309.3	309.1	308.8	308.5
147.5°	324.7	324.7	324.7	324.4	324.0	323.6	323.2	322.7
150°	333.7	333.7	333.7	333.5	333.1	332.7	332.3	331.8
152.5°	342.0	342.1	342.2	342.1	341.7	341.3	341.0	340.6
155°	354.1	354.4	354.7	354.5	354.1	353.6	353.1	352.6
157.5°	364.5	364.9	365.2	365.1	364.7	364.4	363.9	363.6
160°	371.0	371.3	371.7	371.7	371.4	371.1	370.9	370.6
162.5°	377.0	377.4	377.7	377.6	377.2	376.7	376.3	375.9
165°	384.7	385.0	385.5	385.5	385.0	384.5	384.0	383.5
167.5°	390.8	391.3	391.7	391.7	391.3	390.8	390.4	390.0
170°	394.2	394.8	395.2	395.2	394.8	394.2	393.8	393.2
172.5°	396.9	397.3	397.8	397.8	397.3	396.8	396.3	395.8
175°	399.8	400.2	400.6	400.6	400.1	399.6	399.1	398.6
177.5°	401.1	401.4	401.7	401.7	401.4	400.9	400.6	400.1
180°	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2

(END OF REPORT)