

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: P332440-935

Luminaire Tested: **S123RDIW-S775D1030U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332440-935
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: S123RDIW-S775D1030U935-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1030 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6064.1 lumens
Efficiency: N/A
Efficacy: 115.3 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

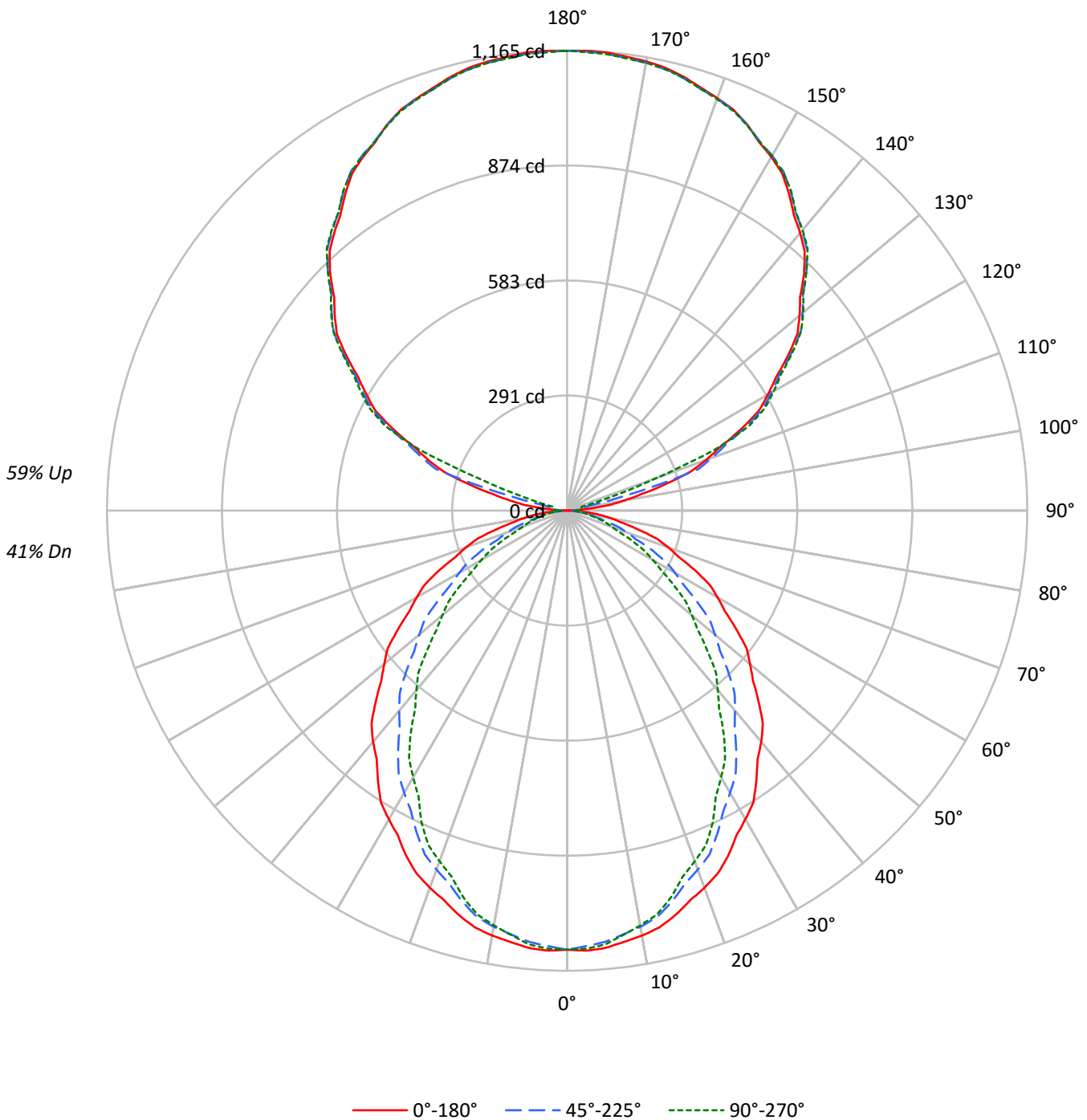
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	48	48	48	41
1	96	92	88	85	88	84	81	78	69	67	65	56	54	53	43	42	41	35
2	88	81	75	70	80	74	69	64	61	57	54	49	47	44	38	37	35	30
3	80	71	64	58	73	65	59	54	54	50	46	44	41	38	34	32	30	26
4	73	63	55	49	67	58	51	46	48	43	39	39	35	33	31	28	26	22
5	67	56	48	42	61	52	45	40	43	38	34	35	31	28	28	25	23	20
6	62	50	43	37	57	46	39	34	39	34	30	32	28	25	25	22	20	17
7	57	46	38	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15
8	53	41	34	29	49	38	31	27	32	27	23	27	23	20	21	18	16	14
9	50	38	30	25	45	35	28	24	29	24	21	24	21	18	20	17	15	13
10	46	35	28	23	42	32	26	21	27	22	19	23	19	16	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11965	11965	11965
5°	12011	11846	11914
10°	11943	11696	11657
15°	11814	11422	11303
20°	11639	11080	10822
25°	11457	10696	10354
30°	11216	10253	9692
35°	10970	9809	9087
40°	10742	9285	8335
45°	10443	8770	7658
50°	10114	8182	6899
55°	9779	7512	6191
60°	9472	6794	5414
65°	9070	6016	4638
70°	8567	5051	3745
75°	7835	3976	3523
80°	6986	3521	3242
85°	5903	3112	2890



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.4	1.7
10°-20°	290.4	4.8
20°-30°	418.2	6.9
30°-40°	471.1	7.8
40°-50°	450.7	7.4
50°-60°	369.0	6.1
60°-70°	249.0	4.1
70°-80°	125.3	2.1
80°-90°	36.4	0.6
90°-100°	42.3	0.7
100°-110°	201.7	3.3
110°-120°	484.5	8.0
120°-130°	616.9	10.2
130°-140°	659.2	10.9
140°-150°	616.4	10.2
150°-160°	497.2	8.2
160°-170°	320.9	5.3
170°-180°	110.6	1.8
0°-30°	813.0	13.4
0°-40°	1284.1	21.2
0°-60°	2103.8	34.7
0°-90°	2514.4	41.5
90°-120°	728.5	12.0
90°-150°	2621.0	43.2
90°-180°	3550.0	58.5
0°-180°	6064.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1112	1112	1112	1112	1112	
5°	1112	1107	1096	1104	1103	105
15°	1060	1049	1025	1020	1014	299
25°	965	941	901	882	872	443
35°	835	801	746	709	692	522
45°	686	644	576	526	503	529
55°	521	475	400	350	330	467
65°	356	305	236	194	182	352
75°	188	145	96	87	85	201
85°	48	29	25	24	23	54
90°	1	10	21	24	26	5
95°	53	20	27	33	33	65
105°	258	262	189	45	38	273
115°	484	489	496	505	508	477
125°	682	688	692	694	695	608
135°	848	853	857	859	857	653
145°	979	985	987	988	988	613
155°	1078	1077	1078	1081	1077	497
165°	1137	1135	1134	1140	1135	321
175°	1164	1160	1160	1166	1160	111
180°	1164	1164	1164	1164	1164	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6
2.5°	1115.2	1114.6	1113.9	1113.3	1112.7	1111.4	1109.4	1107.5	1105.6	1103.6	1105.4
5°	1111.6	1110.6	1109.6	1108.6	1107.6	1105.9	1103.5	1101.0	1098.6	1096.3	1098.0
7.5°	1101.3	1100.3	1099.2	1098.0	1097.0	1094.8	1091.7	1088.6	1085.5	1082.4	1083.4
10°	1092.7	1091.2	1089.9	1088.5	1087.0	1084.5	1080.9	1077.4	1073.8	1070.1	1070.3
12.5°	1080.4	1078.8	1077.3	1075.7	1074.2	1071.2	1066.8	1062.4	1057.9	1053.5	1053.4
15°	1060.2	1058.0	1055.8	1053.6	1051.4	1047.5	1041.9	1036.3	1030.6	1025.0	1024.1
17.5°	1034.7	1032.3	1029.7	1027.1	1024.5	1019.7	1012.5	1005.4	998.2	991.2	989.0
20°	1016.1	1012.8	1009.6	1006.4	1003.2	997.8	990.2	982.6	975.0	967.3	964.8
22.5°	995.1	991.4	987.7	984.0	980.3	974.5	966.4	958.3	950.2	942.1	938.8
25°	964.7	959.7	954.6	949.6	944.6	937.5	928.2	919.0	909.8	900.6	896.4
27.5°	927.6	922.1	916.6	911.1	905.6	897.7	887.4	877.2	866.9	856.6	850.8
30°	902.4	896.4	890.4	884.4	878.4	869.8	858.6	847.3	836.1	824.9	818.1
32.5°	877.2	870.4	863.6	856.8	850.0	840.6	828.7	816.9	805.0	793.2	785.7
35°	834.8	827.6	820.4	813.2	806.0	796.2	783.8	771.3	758.9	746.5	737.9
37.5°	791.9	783.9	775.8	767.8	759.8	749.2	736.0	722.7	709.5	696.2	686.4
40°	764.5	755.7	746.8	738.0	729.3	717.7	703.5	689.3	675.0	660.8	650.4
42.5°	733.5	724.7	715.8	707.1	698.3	686.5	671.8	657.0	642.4	627.7	616.3
45°	686.0	677.1	668.0	659.0	650.0	637.8	622.3	606.9	591.5	576.1	564.6
47.5°	638.7	628.8	618.9	609.0	599.1	586.4	571.0	555.5	540.1	524.7	512.3
50°	604.0	594.6	585.2	575.8	566.4	553.5	537.4	521.1	504.9	488.6	476.2
52.5°	573.0	562.8	552.6	542.3	532.2	519.0	502.9	486.9	470.8	454.7	441.9
55°	521.1	511.3	501.4	491.6	481.8	468.4	451.3	434.4	417.3	400.3	388.7
57.5°	473.1	462.4	451.8	441.0	430.3	416.5	399.3	382.2	365.1	348.0	337.0
60°	440.0	429.0	417.9	406.9	395.9	382.0	365.4	348.8	332.2	315.6	304.7
62.5°	406.7	395.7	384.7	373.7	362.7	348.9	332.3	315.6	299.0	282.3	272.2
65°	356.1	345.1	334.1	323.0	312.0	298.7	283.1	267.4	251.8	236.2	226.4
67.5°	305.5	294.3	283.2	272.0	260.9	247.8	232.8	217.8	202.9	187.9	180.6
70°	272.2	261.5	250.6	239.8	229.0	216.5	202.5	188.6	174.5	160.5	153.4
72.5°	239.1	228.4	217.7	207.1	196.5	184.8	172.0	159.3	146.5	133.8	128.0
75°	188.4	178.8	169.2	159.5	150.0	139.7	128.6	117.6	106.6	95.6	93.6
77.5°	142.2	133.5	124.8	116.1	107.5	99.6	92.5	85.4	78.4	71.2	70.2
80°	112.7	104.4	96.3	88.1	79.8	73.6	69.4	65.2	61.0	56.8	56.2
82.5°	84.6	77.5	70.3	63.3	56.2	51.7	49.7	47.7	45.8	43.8	43.2
85°	47.8	43.4	39.0	34.5	30.1	27.6	27.0	26.4	25.8	25.2	24.9
87.5°	17.5	16.1	14.7	13.3	12.0	11.5	12.1	12.6	13.0	13.5	13.5
90°	0.9	2.8	4.7	6.6	8.5	10.8	13.3	15.8	18.3	20.8	21.5
92.5°	16.1	15.6	15.0	14.5	13.9	14.6	16.5	18.3	20.2	22.1	23.3
95°	52.8	44.9	37.0	29.1	21.3	18.3	20.5	22.6	24.7	26.8	28.2
97.5°	106.0	102.5	98.9	95.4	91.9	83.2	69.4	55.5	41.7	27.8	29.4
100°	146.1	150.0	153.9	157.6	161.5	148.4	118.5	88.5	58.5	28.5	30.0
102.5°	191.8	194.6	197.3	200.1	202.9	187.9	155.2	122.4	89.6	56.9	52.2
105°	257.7	259.8	261.9	264.1	266.1	258.6	241.3	223.9	206.7	189.4	155.4
107.5°	327.3	328.9	330.6	332.3	334.0	336.2	339.0	341.6	344.4	347.2	322.2
110°	373.6	375.1	376.7	378.2	379.7	381.6	383.7	385.8	387.9	390.0	383.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	417.8	419.2	420.6	422.1	423.4	425.2	427.2	429.4	431.5	433.6	433.7
115°	483.5	484.6	485.7	486.9	488.0	489.5	491.2	492.9	494.6	496.4	498.3
117.5°	546.9	548.3	549.7	551.1	552.6	553.7	554.7	555.5	556.4	557.2	558.8
120°	586.3	588.1	589.8	591.5	593.2	594.4	595.0	595.6	596.2	596.7	598.2
122.5°	626.5	627.8	629.3	630.7	632.1	633.2	634.0	634.6	635.4	636.1	637.2
125°	681.5	683.0	684.5	686.0	687.6	688.8	689.5	690.3	691.0	691.8	692.2
127.5°	734.7	736.2	737.8	739.3	740.9	742.1	743.0	744.0	744.9	745.8	746.4
130°	767.9	769.5	771.0	772.6	774.1	775.2	776.0	776.8	777.6	778.3	779.1
132.5°	799.8	801.3	802.8	804.3	805.9	807.0	807.6	808.2	808.8	809.4	810.2
135°	848.3	849.5	850.7	851.8	853.0	853.9	854.7	855.5	856.3	857.0	857.6
137.5°	889.8	891.3	892.8	894.2	895.7	896.6	897.1	897.5	897.9	898.4	899.2
140°	917.6	918.7	919.9	921.0	922.1	923.0	923.6	924.2	924.7	925.3	926.1
142.5°	943.1	944.3	945.5	946.6	947.8	948.6	949.2	949.8	950.4	950.9	951.6
145°	979.0	980.2	981.6	983.0	984.3	985.2	985.6	985.9	986.4	986.7	987.1
147.5°	1012.7	1013.6	1014.4	1015.3	1016.2	1016.8	1017.2	1017.6	1018.0	1018.4	1018.7
150°	1033.5	1034.0	1034.6	1035.2	1035.7	1036.2	1036.6	1037.0	1037.3	1037.8	1038.1
152.5°	1052.1	1052.4	1052.7	1052.9	1053.2	1053.4	1053.7	1053.9	1054.1	1054.4	1055.1
155°	1078.4	1078.0	1077.6	1077.3	1076.9	1076.8	1076.9	1077.1	1077.4	1077.5	1078.5
157.5°	1098.8	1098.8	1098.7	1098.7	1098.6	1098.5	1098.4	1098.1	1097.9	1097.8	1098.9
160°	1111.3	1111.0	1110.9	1110.7	1110.5	1110.3	1110.1	1109.9	1109.7	1109.6	1110.7
162.5°	1123.0	1122.5	1122.1	1121.5	1121.0	1120.7	1120.5	1120.3	1120.1	1119.9	1121.2
165°	1137.2	1136.6	1136.1	1135.5	1134.9	1134.5	1134.3	1134.1	1133.9	1133.8	1135.3
167.5°	1148.2	1147.5	1146.8	1146.0	1145.2	1144.8	1144.8	1144.8	1144.8	1144.8	1146.3
170°	1154.5	1153.7	1153.0	1152.2	1151.4	1151.1	1151.1	1151.1	1151.1	1151.1	1152.5
172.5°	1158.6	1157.7	1156.8	1155.9	1154.9	1154.6	1154.7	1154.9	1155.0	1155.2	1156.8
175°	1164.0	1163.0	1162.1	1161.1	1160.2	1159.8	1159.9	1160.2	1160.4	1160.5	1161.9
177.5°	1165.4	1164.6	1163.9	1163.1	1162.4	1162.0	1162.2	1162.4	1162.4	1162.6	1163.9
180°	1164.0	1164.0	1164.0	1164.0	1164.0	1164.0	1164.0	1164.0	1164.0	1164.0	1164.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6
2.5°	1107.2	1109.0	1110.7	1111.5	1111.1	1110.8	1110.4	1110.2
5°	1099.8	1101.6	1103.5	1104.1	1103.8	1103.4	1102.9	1102.6
7.5°	1084.4	1085.4	1086.4	1086.6	1085.9	1085.2	1084.5	1083.8
10°	1070.6	1070.7	1070.9	1070.6	1069.5	1068.5	1067.6	1066.5
12.5°	1053.3	1053.2	1053.1	1052.4	1051.3	1050.1	1049.0	1047.8
15°	1023.0	1022.0	1021.1	1019.9	1018.5	1017.0	1015.6	1014.3
17.5°	986.9	984.8	982.7	980.6	978.4	976.4	974.3	972.2
20°	962.2	959.5	956.9	954.4	952.0	949.6	947.2	944.8
22.5°	935.6	932.4	929.1	926.3	924.1	921.9	919.6	917.4
25°	892.3	888.0	883.8	880.6	878.4	876.2	874.0	871.8
27.5°	844.9	839.1	833.3	828.6	825.3	821.9	818.6	815.2
30°	811.3	804.4	797.6	792.6	789.5	786.3	783.0	779.8
32.5°	778.3	770.9	763.4	757.9	754.6	751.2	747.9	744.5
35°	729.3	720.7	712.0	705.9	702.3	698.7	695.1	691.5
37.5°	676.6	666.8	657.0	650.0	645.5	641.0	636.6	632.1
40°	640.0	629.6	619.1	611.7	607.0	602.4	597.8	593.2
42.5°	604.9	593.5	582.1	574.4	570.2	566.1	562.0	557.8
45°	553.3	541.8	530.4	522.3	517.5	512.6	507.9	503.1
47.5°	499.8	487.4	475.0	466.7	462.4	458.1	453.8	449.5
50°	463.8	451.3	438.9	430.4	425.9	421.2	416.6	412.0
52.5°	429.0	416.0	403.1	394.6	390.5	386.3	382.2	378.1
55°	377.0	365.4	353.8	345.9	342.0	337.9	334.0	329.9
57.5°	326.1	315.0	304.1	296.9	293.5	290.1	286.6	283.3
60°	293.9	283.1	272.2	265.2	261.7	258.3	254.9	251.5
62.5°	262.0	251.8	241.7	234.8	231.2	227.6	224.1	220.5
65°	216.5	206.7	196.9	190.9	188.7	186.5	184.3	182.1
67.5°	173.2	165.9	158.5	153.7	151.4	149.0	146.6	144.2
70°	146.5	139.4	132.4	127.9	125.6	123.4	121.2	119.0
72.5°	122.3	116.6	110.9	107.5	106.6	105.7	104.8	103.8
75°	91.5	89.5	87.6	86.4	85.9	85.6	85.2	84.7
77.5°	69.1	67.9	66.9	66.1	65.8	65.3	64.9	64.6
80°	55.6	55.0	54.4	53.9	53.5	53.1	52.7	52.3
82.5°	42.6	42.0	41.4	41.1	41.0	40.9	40.8	40.7
85°	24.5	24.0	23.7	23.4	23.4	23.4	23.4	23.4
87.5°	13.5	13.5	13.5	13.4	13.3	13.3	13.2	13.1
90°	22.3	23.1	23.8	24.4	24.8	25.1	25.6	25.9
92.5°	24.6	25.8	27.0	27.8	28.0	28.2	28.5	28.7
95°	29.5	30.8	32.2	32.9	32.9	32.9	32.9	32.9
97.5°	30.9	32.5	34.0	34.9	35.0	35.2	35.5	35.6
100°	31.6	33.1	34.7	35.6	35.7	35.9	36.2	36.3
102.5°	47.4	42.6	37.8	35.6	36.0	36.3	36.7	37.0
105°	121.4	87.3	53.3	36.5	36.9	37.3	37.6	38.1
107.5°	297.2	272.3	247.4	222.1	196.4	170.8	145.2	119.5
110°	377.4	371.0	364.6	347.8	320.3	292.7	265.3	237.8



TEST NUMBER: P332440-935

CATALOG NUMBER: S123RDIW-S775D1030U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	433.9	433.9	434.0	431.2	425.4	419.7	413.8	408.0
115°	500.2	502.1	504.1	505.4	506.2	507.0	507.7	508.5
117.5°	560.3	561.9	563.4	564.3	564.4	564.6	564.7	564.9
120°	599.8	601.3	602.9	603.6	603.6	603.6	603.6	603.6
122.5°	638.3	639.4	640.4	641.1	641.2	641.4	641.5	641.7
125°	692.6	693.0	693.4	693.8	694.1	694.5	694.9	695.3
127.5°	747.0	747.6	748.3	748.4	748.0	747.6	747.3	746.8
130°	779.9	780.6	781.4	781.6	781.2	780.8	780.4	780.1
132.5°	811.0	811.8	812.5	812.6	812.1	811.6	811.1	810.5
135°	858.2	858.8	859.3	859.3	858.8	858.2	857.6	857.0
137.5°	900.2	901.1	902.1	902.3	901.9	901.6	901.1	900.8
140°	926.9	927.6	928.4	928.6	928.2	927.8	927.5	927.0
142.5°	952.2	952.8	953.4	953.4	952.9	952.4	951.8	951.2
145°	987.5	987.9	988.3	988.4	988.4	988.4	988.4	988.4
147.5°	1019.2	1019.5	1019.9	1019.7	1018.8	1017.9	1017.0	1016.2
150°	1038.5	1038.9	1039.3	1039.2	1038.6	1038.0	1037.5	1036.9
152.5°	1055.8	1056.4	1057.1	1057.0	1056.1	1055.2	1054.4	1053.5
155°	1079.4	1080.4	1081.4	1081.2	1080.1	1079.0	1077.8	1076.7
157.5°	1100.1	1101.2	1102.3	1102.2	1100.7	1099.2	1097.7	1096.2
160°	1111.8	1113.0	1114.1	1114.0	1112.7	1111.4	1110.0	1108.6
162.5°	1122.5	1123.9	1125.2	1125.2	1124.0	1122.8	1121.6	1120.4
165°	1136.8	1138.3	1139.9	1140.0	1138.7	1137.3	1135.9	1134.6
167.5°	1147.9	1149.4	1151.0	1151.0	1149.4	1147.9	1146.3	1144.8
170°	1154.1	1155.6	1157.2	1157.2	1155.6	1154.1	1152.5	1151.1
172.5°	1158.3	1159.8	1161.3	1161.2	1159.6	1157.9	1156.2	1154.5
175°	1163.2	1164.6	1166.0	1165.9	1164.3	1162.8	1161.2	1159.7
177.5°	1165.1	1166.3	1167.5	1167.4	1165.9	1164.3	1162.8	1161.2
180°	1164.0	1164.0	1164.0	1164.0	1164.0	1164.0	1164.0	1164.0

(END OF REPORT)