

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: P332440-930

Luminaire Tested: **S123RDIW-S775D1030U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332440-930  
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-S775D1030U930-4F0-1E-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: 5742.3 lumens  
Efficiency: N/A  
Efficacy: 109.2 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

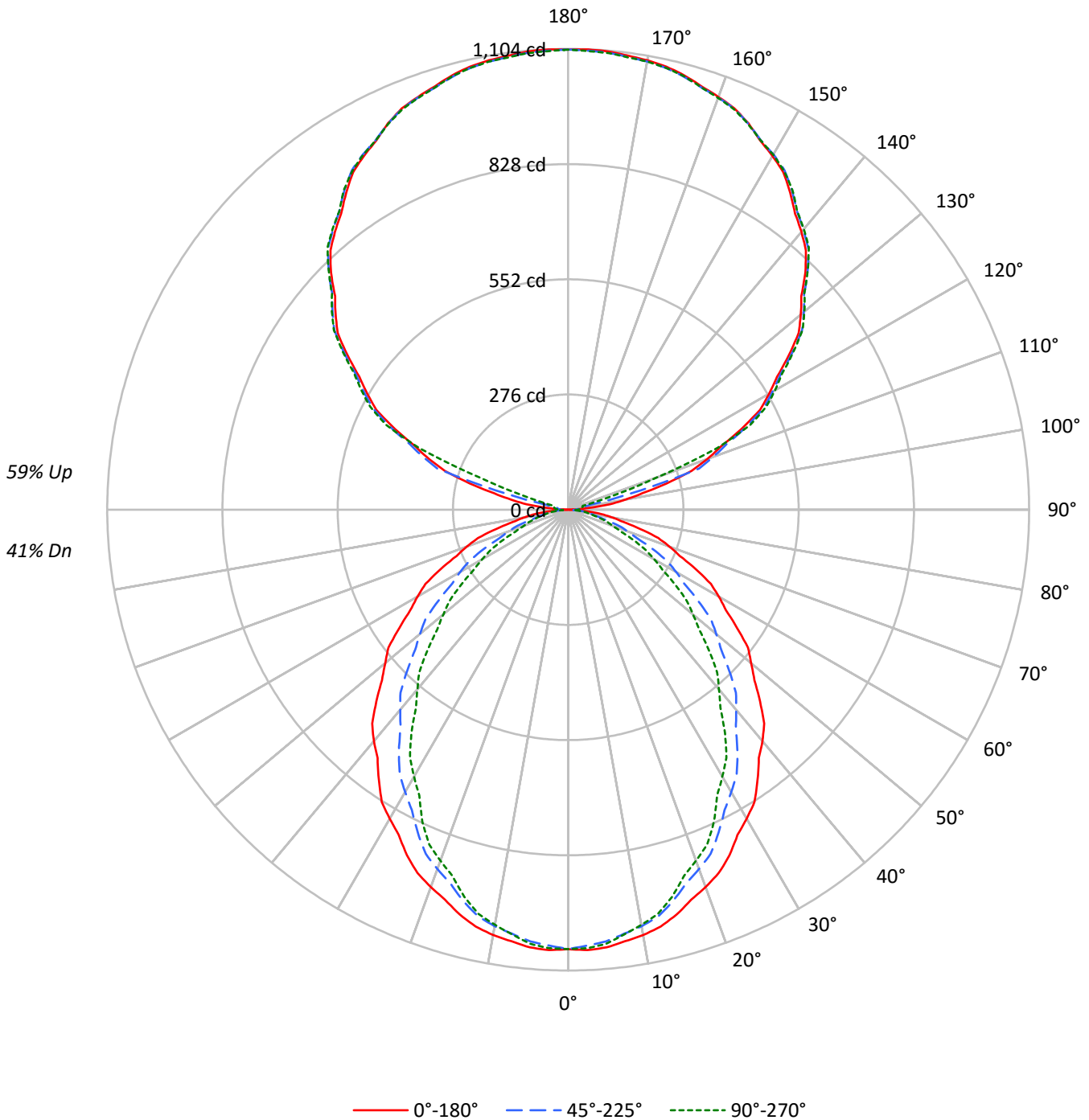
Input Watts (W): 52.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	11330	11330	11330
5°	11373	11217	11282
10°	11309	11075	11038
15°	11188	10816	10702
20°	11021	10493	10247
25°	10849	10128	9804
30°	10621	9708	9178
35°	10387	9289	8604
40°	10172	8792	7893
45°	9889	8304	7252
50°	9577	7748	6532
55°	9259	7112	5863
60°	8968	6433	5126
65°	8588	5695	4391
70°	8113	4784	3547
75°	7419	3764	3335
80°	6614	3335	3068
85°	5582	2952	2742



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	98.8	1.7
10°-20°	275.0	4.8
20°-30°	396.0	6.9
30°-40°	446.1	7.8
40°-50°	426.7	7.4
50°-60°	349.5	6.1
60°-70°	235.8	4.1
70°-80°	118.6	2.1
80°-90°	34.5	0.6
90°-100°	40.1	0.7
100°-110°	191.0	3.3
110°-120°	458.8	8.0
120°-130°	584.2	10.2
130°-140°	624.2	10.9
140°-150°	583.7	10.2
150°-160°	470.8	8.2
160°-170°	303.9	5.3
170°-180°	104.7	1.8
0°-30°	769.9	13.4
0°-40°	1215.9	21.2
0°-60°	1992.1	34.7
0°-90°	2381.0	41.5
90°-120°	689.8	12.0
90°-150°	2481.9	43.2
90°-180°	3361.0	58.5
0°-180°	5742.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1053	1053	1053	1053	1053	
5°	1053	1048	1038	1045	1044	100
15°	1004	994	971	966	960	283
25°	914	891	853	835	826	420
35°	790	759	707	671	655	495
45°	650	610	546	498	476	501
55°	493	450	379	331	312	442
65°	337	289	224	184	172	334
75°	178	137	90	82	80	190
85°	45	27	24	22	22	51
90°	1	9	20	23	24	5
95°	50	19	25	31	31	62
105°	244	248	179	43	36	259
115°	458	463	470	478	482	452
125°	645	652	655	657	658	576
135°	803	808	812	814	812	618
145°	927	932	934	936	936	580
155°	1021	1020	1020	1024	1020	470
165°	1077	1074	1074	1079	1074	304
175°	1102	1098	1099	1104	1098	105
180°	1102	1102	1102	1102	1102	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6
2.5°	1056.0	1055.4	1054.8	1054.2	1053.6	1052.4	1050.5	1048.7	1046.9	1045.1	1046.8
5°	1052.6	1051.7	1050.7	1049.8	1048.8	1047.2	1044.9	1042.6	1040.3	1038.1	1039.8
7.5°	1042.8	1041.9	1040.8	1039.8	1038.8	1036.7	1033.8	1030.9	1027.9	1024.9	1025.9
10°	1034.7	1033.3	1032.0	1030.7	1029.3	1027.0	1023.5	1020.2	1016.8	1013.3	1013.5
12.5°	1023.0	1021.6	1020.1	1018.6	1017.2	1014.3	1010.2	1006.0	1001.8	997.6	997.5
15°	1004.0	1001.8	999.7	997.7	995.6	991.9	986.6	981.3	975.9	970.6	969.7
17.5°	979.8	977.5	975.0	972.6	970.1	965.6	958.8	952.0	945.3	938.6	936.5
20°	962.1	959.0	956.0	953.0	950.0	944.9	937.6	930.4	923.2	916.0	913.5
22.5°	942.3	938.8	935.3	931.8	928.3	922.8	915.1	907.4	899.8	892.1	889.0
25°	913.5	908.7	903.9	899.2	894.5	887.7	879.0	870.3	861.5	852.8	848.8
27.5°	878.4	873.2	868.0	862.7	857.5	850.0	840.3	830.6	820.8	811.1	805.6
30°	854.5	848.8	843.2	837.5	831.8	823.6	813.0	802.3	791.7	781.1	774.7
32.5°	830.6	824.2	817.7	811.3	804.9	796.0	784.7	773.6	762.3	751.1	744.0
35°	790.5	783.7	776.8	770.1	763.2	753.9	742.2	730.3	718.6	706.9	698.7
37.5°	749.9	742.2	734.7	727.1	719.5	709.5	696.9	684.4	671.8	659.3	650.0
40°	723.9	715.6	707.2	698.9	690.6	679.6	666.2	652.7	639.2	625.7	615.9
42.5°	694.6	686.2	677.8	669.5	661.2	650.0	636.1	622.2	608.3	594.4	583.6
45°	649.6	641.2	632.6	624.0	615.5	604.0	589.3	574.7	560.1	545.5	534.7
47.5°	604.8	595.4	586.0	576.7	567.3	555.3	540.7	526.0	511.4	496.8	485.1
50°	571.9	563.0	554.2	545.2	536.3	524.2	508.8	493.4	478.1	462.7	450.9
52.5°	542.6	533.0	523.3	513.6	503.9	491.5	476.2	461.1	445.8	430.6	418.4
55°	493.4	484.1	474.8	465.5	456.2	443.5	427.4	411.3	395.2	379.0	368.0
57.5°	448.0	437.9	427.8	417.6	407.5	394.4	378.1	361.9	345.7	329.5	319.1
60°	416.6	406.2	395.7	385.3	374.9	361.7	346.0	330.3	314.5	298.8	288.5
62.5°	385.1	374.7	364.3	353.8	343.5	330.4	314.6	298.9	283.2	267.3	257.7
65°	337.2	326.8	316.3	305.9	295.5	282.8	268.1	253.2	238.5	223.6	214.3
67.5°	289.3	278.7	268.2	257.6	247.0	234.6	220.5	206.3	192.1	177.9	171.0
70°	257.8	247.6	237.3	227.1	216.9	205.0	191.8	178.6	165.3	152.0	145.3
72.5°	226.4	216.3	206.2	196.1	186.1	175.0	162.9	150.8	138.8	126.7	121.2
75°	178.4	169.3	160.2	151.1	142.0	132.2	121.8	111.4	100.9	90.5	88.6
77.5°	134.7	126.5	118.2	110.0	101.7	94.3	87.6	80.9	74.2	67.4	66.4
80°	106.7	98.9	91.2	83.4	75.6	69.7	65.7	61.7	57.8	53.8	53.2
82.5°	80.1	73.4	66.6	59.9	53.2	48.9	47.0	45.2	43.4	41.5	40.9
85°	45.2	41.1	36.9	32.7	28.5	26.2	25.6	25.0	24.5	23.9	23.6
87.5°	16.6	15.2	13.9	12.6	11.3	10.9	11.4	11.9	12.3	12.8	12.8
90°	0.8	2.6	4.5	6.3	8.1	10.2	12.6	14.9	17.3	19.6	20.4
92.5°	15.2	14.8	14.2	13.7	13.2	13.9	15.7	17.4	19.2	21.0	22.1
95°	50.0	42.5	35.1	27.6	20.1	17.4	19.4	21.4	23.4	25.4	26.7
97.5°	100.4	97.0	93.7	90.3	87.0	78.8	65.7	52.6	39.5	26.3	27.8
100°	138.4	142.0	145.7	149.3	153.0	140.6	112.2	83.8	55.4	27.0	28.5
102.5°	181.6	184.3	186.9	189.5	192.1	177.9	146.9	115.9	84.9	53.9	49.4
105°	244.0	246.1	248.0	250.1	252.0	244.8	228.4	212.1	195.8	179.4	147.2
107.5°	309.9	311.4	313.1	314.7	316.3	318.4	321.0	323.5	326.1	328.7	305.1
110°	353.8	355.2	356.7	358.2	359.5	361.3	363.3	365.3	367.3	369.3	363.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	395.7	397.0	398.3	399.7	401.0	402.6	404.6	406.6	408.6	410.6	410.7
115°	457.8	458.9	459.9	461.1	462.1	463.5	465.1	466.8	468.4	470.0	471.9
117.5°	517.9	519.2	520.6	521.9	523.3	524.3	525.2	526.0	526.8	527.7	529.1
120°	555.2	556.8	558.5	560.1	561.7	562.9	563.4	563.9	564.5	565.0	566.5
122.5°	593.2	594.5	595.9	597.2	598.6	599.6	600.3	601.0	601.7	602.3	603.4
125°	645.3	646.8	648.2	649.6	651.1	652.2	652.9	653.6	654.4	655.1	655.5
127.5°	695.7	697.2	698.6	700.1	701.6	702.7	703.6	704.5	705.3	706.2	706.8
130°	727.2	728.6	730.1	731.6	733.0	734.1	734.8	735.6	736.3	737.0	737.8
132.5°	757.3	758.8	760.2	761.7	763.1	764.2	764.8	765.3	765.9	766.5	767.2
135°	803.3	804.5	805.5	806.6	807.7	808.6	809.3	810.1	810.8	811.5	812.0
137.5°	842.6	844.0	845.4	846.8	848.2	849.1	849.5	849.9	850.3	850.7	851.5
140°	868.9	869.9	871.1	872.1	873.2	874.0	874.6	875.1	875.6	876.2	876.9
142.5°	893.1	894.1	895.3	896.3	897.5	898.3	898.8	899.4	899.9	900.4	901.1
145°	927.0	928.2	929.5	930.8	932.1	932.9	933.3	933.6	934.0	934.3	934.7
147.5°	959.0	959.8	960.6	961.4	962.3	962.9	963.2	963.6	963.9	964.3	964.7
150°	978.6	979.1	979.7	980.2	980.7	981.2	981.5	981.9	982.3	982.7	983.0
152.5°	996.3	996.5	996.8	997.0	997.3	997.5	997.8	997.9	998.2	998.4	999.1
155°	1021.2	1020.8	1020.4	1020.1	1019.7	1019.6	1019.8	1019.9	1020.2	1020.3	1021.2
157.5°	1040.5	1040.5	1040.4	1040.4	1040.3	1040.2	1040.1	1039.8	1039.7	1039.5	1040.6
160°	1052.3	1052.1	1051.9	1051.7	1051.6	1051.3	1051.2	1051.0	1050.8	1050.7	1051.7
162.5°	1063.4	1062.9	1062.5	1062.0	1061.5	1061.2	1061.0	1060.9	1060.6	1060.5	1061.7
165°	1076.8	1076.3	1075.8	1075.2	1074.6	1074.3	1074.1	1073.9	1073.7	1073.6	1075.1
167.5°	1087.3	1086.6	1085.9	1085.2	1084.4	1084.0	1084.0	1084.0	1084.0	1084.0	1085.5
170°	1093.2	1092.5	1091.8	1091.0	1090.3	1090.0	1090.0	1090.0	1090.0	1090.0	1091.4
172.5°	1097.1	1096.3	1095.4	1094.5	1093.6	1093.3	1093.4	1093.6	1093.7	1093.9	1095.4
175°	1102.2	1101.3	1100.4	1099.5	1098.6	1098.2	1098.4	1098.6	1098.8	1098.9	1100.2
177.5°	1103.5	1102.8	1102.1	1101.4	1100.7	1100.3	1100.5	1100.7	1100.7	1100.9	1102.1
180°	1102.2	1102.2	1102.2	1102.2	1102.2	1102.2	1102.2	1102.2	1102.2	1102.2	1102.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6
2.5°	1048.4	1050.1	1051.7	1052.5	1052.1	1051.8	1051.5	1051.2
5°	1041.5	1043.2	1044.9	1045.5	1045.2	1044.8	1044.4	1044.1
7.5°	1026.9	1027.8	1028.7	1028.9	1028.3	1027.6	1027.0	1026.3
10°	1013.7	1013.9	1014.1	1013.7	1012.8	1011.8	1010.9	1009.9
12.5°	997.4	997.3	997.2	996.5	995.5	994.3	993.3	992.1
15°	968.7	967.8	966.9	965.7	964.4	963.0	961.7	960.4
17.5°	934.5	932.5	930.5	928.5	926.5	924.5	922.6	920.6
20°	911.1	908.6	906.1	903.8	901.5	899.2	896.9	894.6
22.5°	886.0	882.9	879.8	877.2	875.1	872.9	870.8	868.7
25°	844.9	840.9	836.9	833.9	831.8	829.6	827.6	825.5
27.5°	800.1	794.6	789.0	784.6	781.5	778.3	775.1	771.9
30°	768.3	761.7	755.3	750.6	747.5	744.5	741.4	738.4
32.5°	736.9	729.9	722.8	717.7	714.5	711.3	708.2	705.0
35°	690.6	682.4	674.3	668.5	665.0	661.6	658.2	654.8
37.5°	640.7	631.4	622.2	615.5	611.2	607.0	602.8	598.6
40°	606.0	596.1	586.3	579.2	574.8	570.5	566.1	561.7
42.5°	572.7	562.0	551.2	543.9	540.0	536.1	532.1	528.2
45°	523.9	513.1	502.2	494.6	490.0	485.4	480.9	476.4
47.5°	473.3	461.5	449.8	441.9	437.8	433.7	429.7	425.7
50°	439.2	427.4	415.6	407.6	403.2	398.8	394.5	390.1
52.5°	406.2	394.0	381.7	373.7	369.7	365.8	361.9	358.0
55°	357.0	346.0	335.0	327.6	323.8	320.0	316.3	312.4
57.5°	308.8	298.3	288.0	281.1	277.9	274.7	271.4	268.2
60°	278.3	268.1	257.8	251.1	247.9	244.6	241.4	238.1
62.5°	248.1	238.5	228.9	222.3	218.9	215.6	212.2	208.8
65°	205.0	195.8	186.5	180.8	178.7	176.6	174.6	172.4
67.5°	164.0	157.1	150.1	145.5	143.3	141.0	138.8	136.6
70°	138.7	132.0	125.4	121.1	119.0	116.8	114.8	112.7
72.5°	115.9	110.4	105.0	101.8	100.9	100.1	99.2	98.3
75°	86.7	84.8	82.9	81.8	81.4	81.0	80.6	80.2
77.5°	65.4	64.3	63.3	62.6	62.3	61.9	61.5	61.1
80°	52.7	52.1	51.5	51.0	50.6	50.3	49.9	49.5
82.5°	40.4	39.8	39.2	38.9	38.8	38.7	38.6	38.6
85°	23.2	22.7	22.4	22.2	22.2	22.2	22.2	22.2
87.5°	12.8	12.8	12.8	12.7	12.6	12.6	12.5	12.4
90°	21.1	21.9	22.6	23.1	23.5	23.8	24.2	24.5
92.5°	23.3	24.5	25.6	26.3	26.5	26.7	27.0	27.1
95°	28.0	29.2	30.5	31.1	31.1	31.1	31.1	31.1
97.5°	29.3	30.7	32.2	33.0	33.2	33.3	33.6	33.8
100°	29.9	31.4	32.9	33.7	33.8	34.0	34.2	34.4
102.5°	44.8	40.4	35.8	33.8	34.1	34.4	34.7	35.1
105°	115.0	82.7	50.5	34.6	35.0	35.3	35.6	36.0
107.5°	281.4	257.9	234.2	210.3	186.0	161.8	137.5	113.2
110°	357.3	351.3	345.3	329.3	303.3	277.2	251.2	225.2





TEST NUMBER: P332440-930

CATALOG NUMBER: S123RDIW-S775D1030U930-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	410.8	410.9	411.0	408.3	402.8	397.4	391.8	386.4
115°	473.7	475.5	477.4	478.6	479.3	480.0	480.8	481.5
117.5°	530.6	532.1	533.5	534.3	534.4	534.6	534.8	534.9
120°	567.9	569.4	570.9	571.6	571.6	571.6	571.6	571.6
122.5°	604.4	605.4	606.4	607.1	607.2	607.3	607.5	607.6
125°	655.8	656.2	656.6	657.0	657.3	657.6	658.0	658.4
127.5°	707.4	707.9	708.6	708.7	708.3	707.9	707.6	707.2
130°	738.5	739.2	739.9	740.1	739.7	739.4	739.0	738.7
132.5°	767.9	768.7	769.4	769.5	769.0	768.5	768.0	767.4
135°	812.6	813.2	813.7	813.7	813.2	812.6	812.0	811.5
137.5°	852.4	853.3	854.2	854.4	854.0	853.7	853.3	853.0
140°	877.7	878.4	879.1	879.3	879.0	878.6	878.2	877.8
142.5°	901.6	902.2	902.8	902.8	902.3	901.8	901.3	900.7
145°	935.1	935.5	935.8	936.0	936.0	936.0	936.0	936.0
147.5°	965.1	965.4	965.8	965.6	964.7	963.8	963.0	962.2
150°	983.4	983.7	984.1	984.1	983.5	982.9	982.4	981.9
152.5°	999.7	1000.4	1001.0	1000.9	1000.0	999.2	998.4	997.6
155°	1022.1	1023.0	1024.0	1023.9	1022.8	1021.7	1020.6	1019.5
157.5°	1041.7	1042.8	1043.8	1043.7	1042.3	1040.9	1039.4	1038.0
160°	1052.8	1053.9	1055.0	1054.9	1053.6	1052.4	1051.1	1049.8
162.5°	1062.9	1064.2	1065.4	1065.4	1064.4	1063.2	1062.1	1060.9
165°	1076.4	1077.9	1079.4	1079.5	1078.2	1076.9	1075.6	1074.4
167.5°	1087.0	1088.4	1089.9	1089.9	1088.4	1087.0	1085.5	1084.0
170°	1092.8	1094.3	1095.8	1095.8	1094.3	1092.8	1091.4	1090.0
172.5°	1096.8	1098.2	1099.7	1099.6	1098.0	1096.4	1094.8	1093.2
175°	1101.5	1102.8	1104.1	1104.0	1102.5	1101.1	1099.6	1098.1
177.5°	1103.3	1104.4	1105.5	1105.5	1104.0	1102.5	1101.1	1099.6
180°	1102.2	1102.2	1102.2	1102.2	1102.2	1102.2	1102.2	1102.2

(END OF REPORT)