

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: P332445-927

Luminaire Tested: **S123RDIW-S775D1320U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332445-927  
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: S123RDIW-S775D1320U927-4F0-1E-UDD-F1  
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1320 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5938.2 lumens  
Efficiency: N/A  
Efficacy: 96.7 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-Indirect

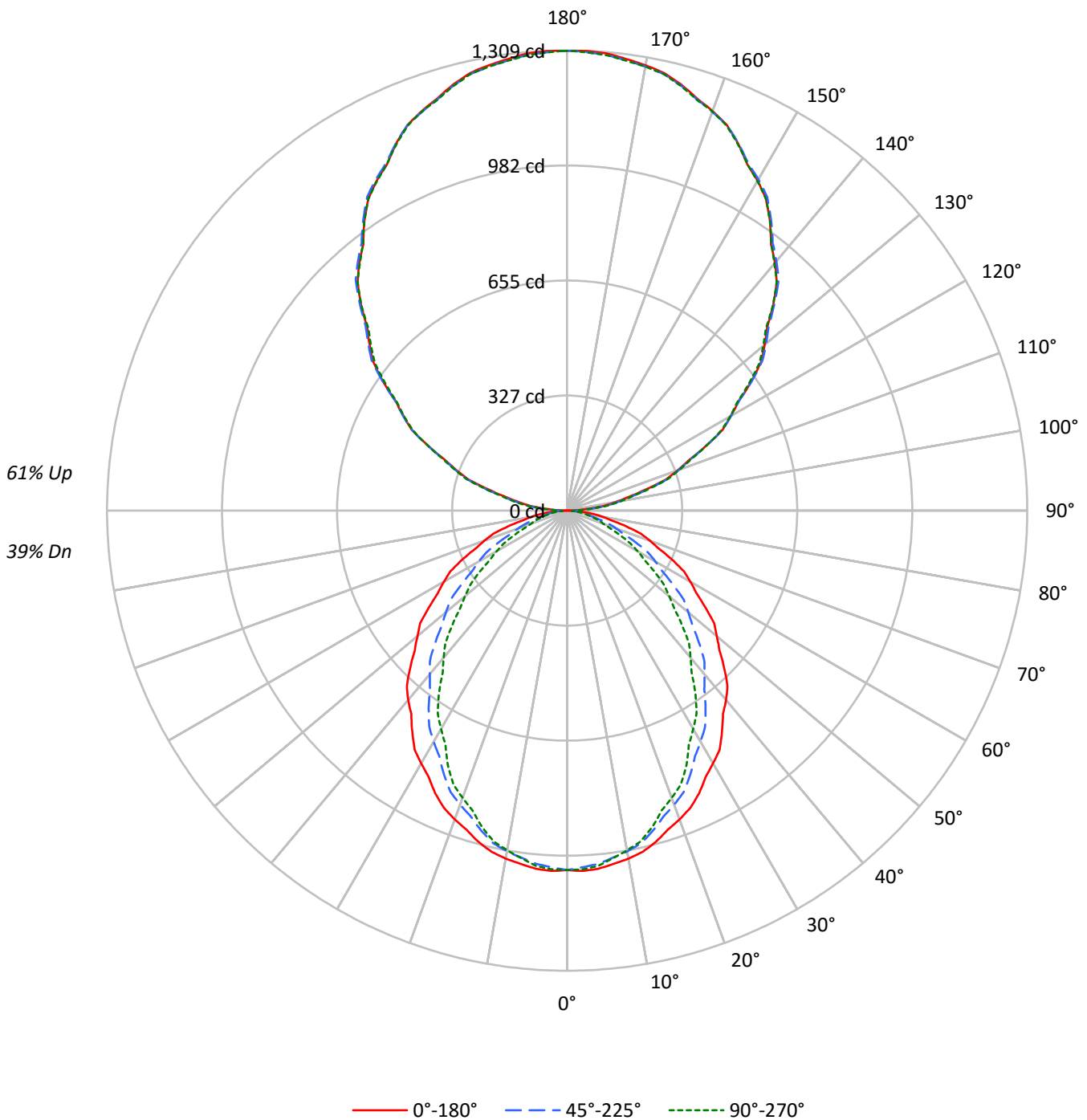
Input Watts (W): 61.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	95	95	95	95	77	77	77	61	61	61	46	46	46	39				
1	96	91	88	84	87	83	80	77	68	66	64	54	52	51	41	40	39	33				
2	87	80	74	69	79	73	68	64	60	56	53	48	45	43	36	35	33	28				
3	80	71	64	58	72	64	58	53	53	49	45	42	39	37	32	30	29	24				
4	73	63	55	49	66	57	51	45	47	42	38	38	34	32	29	27	25	21				
5	67	56	48	42	61	51	44	39	42	37	33	34	30	27	26	24	22	18				
6	62	50	42	37	56	46	39	34	38	33	29	31	27	24	24	21	19	16				
7	57	45	37	32	52	41	35	30	35	29	26	28	24	21	22	19	17	14				
8	53	41	33	28	48	38	31	26	31	26	23	26	22	19	20	17	15	13				
9	49	37	30	25	45	34	28	24	29	24	20	24	20	17	19	16	14	12				
10	46	34	27	23	42	32	25	21	27	22	18	22	18	16	17	15	13	11				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	11009	11009	11009
5°	11051	10899	10962
10°	10989	10762	10726
15°	10871	10510	10399
20°	10709	10195	9958
25°	10542	9841	9526
30°	10320	9434	8918
35°	10093	9025	8360
40°	9884	8543	7669
45°	9608	8068	7046
50°	9306	7529	6348
55°	8997	6912	5697
60°	8714	6250	4982
65°	8344	5535	4266
70°	7884	4648	3446
75°	7207	3656	3244
80°	6428	3242	2982
85°	5434	2865	2655



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.0	1.6
10°-20°	267.2	4.5
20°-30°	384.8	6.5
30°-40°	433.4	7.3
40°-50°	414.6	7.0
50°-60°	339.6	5.7
60°-70°	229.1	3.9
70°-80°	115.3	1.9
80°-90°	34.4	0.6
90°-100°	85.2	1.4
100°-110°	255.0	4.3
110°-120°	433.8	7.3
120°-130°	570.5	9.6
130°-140°	641.3	10.8
140°-150°	630.4	10.6
150°-160°	530.7	8.9
160°-170°	353.3	5.9
170°-180°	123.7	2.1
0°-30°	748.0	12.6
0°-40°	1181.5	19.9
0°-60°	1935.6	32.6
0°-90°	2314.3	39.0
90°-120°	774.0	13.0
90°-150°	2616.2	44.1
90°-180°	3624.0	61.0
0°-180°	5938.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1023	1023	1023	1023	1023	
5°	1023	1018	1009	1016	1014	97
15°	976	966	943	939	933	275
25°	888	866	829	812	802	408
35°	768	737	687	652	636	481
45°	631	592	530	484	463	487
55°	479	437	368	322	304	430
65°	328	281	217	178	168	324
75°	173	133	88	80	78	185
85°	44	27	23	22	22	49
90°	1	11	25	29	31	6
95°	61	68	76	80	80	68
105°	231	234	242	243	244	248
115°	437	439	438	439	438	432
125°	639	642	640	636	632	570
135°	829	835	834	830	828	639
145°	1006	1008	1011	1010	1006	628
155°	1152	1152	1153	1156	1150	530
165°	1254	1252	1251	1257	1250	354
175°	1305	1301	1301	1306	1300	124
180°	1308	1308	1308	1308	1308	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8
2.5°	1026.0	1025.5	1024.8	1024.3	1023.7	1022.5	1020.7	1019.0	1017.2	1015.4	1017.1
5°	1022.8	1021.8	1020.9	1020.0	1019.1	1017.5	1015.3	1013.0	1010.8	1008.7	1010.3
7.5°	1013.3	1012.3	1011.3	1010.3	1009.3	1007.3	1004.5	1001.6	998.8	995.9	996.8
10°	1005.4	1004.0	1002.7	1001.5	1000.1	997.8	994.5	991.3	987.9	984.6	984.8
12.5°	994.0	992.6	991.2	989.8	988.3	985.6	981.5	977.5	973.4	969.3	969.2
15°	975.5	973.4	971.4	969.4	967.3	963.8	958.6	953.5	948.2	943.1	942.2
17.5°	952.0	949.7	947.4	945.0	942.6	938.2	931.6	925.0	918.5	912.0	910.0
20°	934.9	931.8	928.9	926.0	923.1	918.1	911.0	904.0	897.1	890.0	887.6
22.5°	915.6	912.2	908.8	905.4	902.0	896.6	889.1	881.7	874.3	866.8	863.8
25°	887.6	883.0	878.3	873.7	869.1	862.5	854.1	845.6	837.1	828.6	824.7
27.5°	853.5	848.4	843.4	838.3	833.2	825.9	816.5	807.1	797.6	788.1	782.8
30°	830.3	824.7	819.3	813.7	808.2	800.3	790.0	779.6	769.3	759.0	752.7
32.5°	807.1	800.8	794.6	788.3	782.0	773.4	762.5	751.6	740.7	729.8	722.9
35°	768.1	761.4	754.8	748.2	741.6	732.5	721.1	709.6	698.2	686.8	678.9
37.5°	728.6	721.2	713.8	706.5	699.1	689.4	677.2	665.0	652.8	640.6	631.5
40°	703.4	695.3	687.1	679.1	671.0	660.4	647.3	634.2	621.1	608.0	598.4
42.5°	674.9	666.8	658.6	650.5	642.5	631.6	618.1	604.5	591.0	577.5	567.0
45°	631.2	623.0	614.7	606.3	598.0	586.8	572.6	558.4	544.2	530.0	519.5
47.5°	587.6	578.5	569.4	560.3	551.2	539.6	525.4	511.1	496.9	482.8	471.3
50°	555.7	547.1	538.4	529.7	521.1	509.3	494.4	479.4	464.5	449.6	438.2
52.5°	527.2	517.8	508.4	499.0	489.6	477.5	462.7	448.0	433.2	418.4	406.5
55°	479.4	470.4	461.4	452.3	443.3	430.9	415.3	399.7	384.0	368.3	357.6
57.5°	435.3	425.5	415.7	405.8	395.9	383.2	367.4	351.6	335.9	320.2	310.1
60°	404.8	394.7	384.5	374.4	364.2	351.5	336.2	320.9	305.6	290.3	280.4
62.5°	374.2	364.1	353.9	343.8	333.7	321.0	305.7	290.4	275.1	259.8	250.4
65°	327.6	317.5	307.4	297.2	287.1	274.8	260.5	246.1	231.7	217.3	208.3
67.5°	281.1	270.8	260.5	250.3	240.0	228.0	214.2	200.4	186.6	172.9	166.1
70°	250.5	240.6	230.6	220.6	210.7	199.2	186.3	173.5	160.6	147.7	141.2
72.5°	220.0	210.2	200.3	190.5	180.8	170.0	158.3	146.6	134.8	123.1	117.8
75°	173.3	164.5	155.7	146.8	138.0	128.5	118.4	108.2	98.1	87.9	86.1
77.5°	130.9	122.9	114.9	106.9	98.9	91.7	85.1	78.6	72.1	65.5	64.6
80°	103.7	96.1	88.6	81.0	73.4	67.7	63.8	60.0	56.2	52.3	51.7
82.5°	77.8	71.3	64.7	58.2	51.7	47.5	45.7	43.9	42.1	40.3	39.8
85°	44.0	39.9	35.9	31.8	27.7	25.4	24.9	24.3	23.8	23.2	22.9
87.5°	16.2	15.0	13.8	12.6	11.5	11.2	11.8	12.4	13.0	13.5	13.6
90°	1.0	3.3	5.6	7.8	10.1	12.8	15.8	18.7	21.7	24.6	25.6
92.5°	24.9	26.4	28.0	29.5	31.1	32.7	34.4	36.0	37.8	39.5	40.2
95°	60.6	62.2	63.8	65.4	67.0	68.8	70.6	72.4	74.2	76.0	76.9
97.5°	107.7	108.8	110.0	111.2	112.4	113.7	115.0	116.3	117.6	119.0	120.0
100°	139.7	141.1	142.4	143.9	145.2	146.5	147.6	148.8	149.9	151.1	151.7
102.5°	176.7	177.5	178.4	179.2	180.0	181.2	182.7	184.2	185.7	187.2	187.9
105°	231.2	231.6	232.1	232.5	233.0	234.2	236.3	238.4	240.4	242.5	242.5
107.5°	294.5	294.8	295.0	295.3	295.6	296.1	296.9	297.8	298.6	299.4	300.2
110°	333.9	334.4	334.9	335.3	335.7	336.2	336.7	337.2	337.5	338.0	339.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	375.0	375.3	375.6	375.8	376.1	376.3	376.4	376.4	376.6	376.7	377.8
115°	436.7	437.4	438.0	438.7	439.4	439.5	439.0	438.6	438.2	437.7	437.9
117.5°	498.8	499.2	499.6	500.1	500.6	500.5	499.9	499.3	498.7	498.1	498.0
120°	537.3	538.7	540.1	541.5	542.8	543.0	541.8	540.7	539.6	538.4	538.1
122.5°	577.7	578.6	579.6	580.7	581.6	581.9	581.2	580.7	580.0	579.5	578.8
125°	639.1	639.8	640.4	641.1	641.8	641.9	641.4	641.0	640.6	640.1	639.2
127.5°	695.8	697.3	698.7	700.1	701.6	702.1	701.6	701.1	700.6	700.1	698.8
130°	733.6	735.4	737.3	739.1	740.9	741.5	740.8	740.1	739.4	738.7	737.8
132.5°	771.4	773.2	775.1	776.9	778.7	779.3	778.9	778.4	777.8	777.4	776.3
135°	829.2	830.5	831.9	833.2	834.6	835.2	835.0	834.7	834.5	834.2	833.4
137.5°	882.6	883.7	884.9	886.0	887.2	888.0	888.6	889.2	889.8	890.4	889.4
140°	919.6	920.7	921.9	923.0	924.2	924.8	925.0	925.3	925.5	925.7	925.5
142.5°	953.2	954.4	955.5	956.7	957.8	958.6	959.0	959.4	959.8	960.3	960.0
145°	1005.8	1006.3	1006.8	1007.3	1007.7	1008.3	1008.9	1009.6	1010.3	1011.0	1010.7
147.5°	1051.9	1052.7	1053.5	1054.4	1055.2	1055.9	1056.5	1057.2	1057.8	1058.4	1058.4
150°	1083.9	1084.4	1084.9	1085.3	1085.8	1086.2	1086.7	1087.1	1087.6	1088.1	1088.1
152.5°	1110.2	1110.9	1111.5	1112.1	1112.8	1113.3	1113.6	1113.8	1114.1	1114.4	1114.8
155°	1151.8	1151.8	1151.8	1151.8	1151.8	1151.9	1152.1	1152.3	1152.5	1152.8	1153.7
157.5°	1187.1	1186.8	1186.5	1186.3	1186.0	1186.0	1186.1	1186.3	1186.5	1186.7	1187.6
160°	1209.3	1208.9	1208.4	1207.9	1207.4	1207.2	1207.2	1207.2	1207.2	1207.2	1208.4
162.5°	1229.0	1228.4	1227.7	1227.1	1226.5	1226.2	1226.5	1226.6	1226.8	1226.9	1228.1
165°	1254.5	1253.8	1253.2	1252.4	1251.8	1251.4	1251.4	1251.4	1251.4	1251.4	1252.8
167.5°	1274.9	1273.9	1273.0	1272.1	1271.2	1270.8	1271.0	1271.2	1271.4	1271.5	1273.0
170°	1286.3	1285.5	1284.5	1283.7	1282.7	1282.2	1282.2	1282.2	1282.2	1282.2	1283.8
172.5°	1295.4	1294.5	1293.6	1292.7	1291.7	1291.3	1291.3	1291.3	1291.3	1291.3	1292.7
175°	1304.9	1303.9	1303.1	1302.1	1301.2	1300.8	1300.8	1300.8	1300.8	1300.8	1302.1
177.5°	1308.8	1308.1	1307.3	1306.5	1305.8	1305.4	1305.4	1305.4	1305.4	1305.4	1306.5
180°	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8
2.5°	1018.7	1020.3	1021.9	1022.6	1022.3	1022.0	1021.7	1021.4
5°	1011.9	1013.6	1015.3	1015.9	1015.6	1015.2	1014.8	1014.5
7.5°	997.8	998.6	999.6	999.7	999.1	998.5	997.8	997.2
10°	985.0	985.2	985.3	985.0	984.0	983.1	982.2	981.3
12.5°	969.1	969.0	968.9	968.3	967.3	966.1	965.1	964.0
15°	941.3	940.3	939.4	938.3	937.1	935.7	934.5	933.2
17.5°	908.0	906.1	904.1	902.2	900.2	898.3	896.4	894.5
20°	885.3	882.8	880.4	878.1	875.9	873.7	871.5	869.3
22.5°	860.9	857.9	854.8	852.3	850.2	848.2	846.1	844.1
25°	820.9	817.1	813.2	810.2	808.2	806.1	804.1	802.1
27.5°	777.4	772.1	766.7	762.4	759.3	756.2	753.1	750.0
30°	746.5	740.1	733.9	729.3	726.4	723.4	720.4	717.5
32.5°	716.1	709.2	702.3	697.4	694.3	691.2	688.1	685.0
35°	671.0	663.1	655.1	649.5	646.2	642.9	639.5	636.2
37.5°	622.5	613.5	604.5	598.0	593.9	589.8	585.7	581.6
40°	588.8	579.2	569.7	562.8	558.5	554.3	550.0	545.8
42.5°	556.5	546.1	535.6	528.5	524.7	520.9	517.1	513.3
45°	509.1	498.5	488.0	480.5	476.1	471.7	467.3	462.9
47.5°	459.9	448.5	437.0	429.4	425.4	421.4	417.6	413.6
50°	426.7	415.3	403.9	396.0	391.8	387.5	383.3	379.1
52.5°	394.7	382.8	370.9	363.1	359.3	355.5	351.6	347.8
55°	346.9	336.2	325.5	318.3	314.7	310.9	307.3	303.6
57.5°	300.0	289.9	279.8	273.1	270.1	266.9	263.7	260.6
60°	270.4	260.5	250.5	244.0	240.8	237.7	234.6	231.4
62.5°	241.1	231.7	222.4	216.0	212.7	209.5	206.2	202.9
65°	199.2	190.2	181.2	175.6	173.6	171.6	169.6	167.5
67.5°	159.4	152.7	145.8	141.4	139.3	137.0	134.9	132.7
70°	134.8	128.3	121.8	117.6	115.6	113.5	111.5	109.5
72.5°	112.6	107.3	102.0	98.9	98.1	97.3	96.4	95.5
75°	84.2	82.4	80.6	79.5	79.1	78.7	78.3	78.0
77.5°	63.5	62.5	61.6	60.8	60.5	60.1	59.7	59.4
80°	51.2	50.6	50.1	49.6	49.2	48.9	48.5	48.1
82.5°	39.2	38.7	38.1	37.8	37.7	37.6	37.5	37.5
85°	22.5	22.1	21.8	21.5	21.5	21.5	21.5	21.5
87.5°	13.6	13.6	13.7	13.7	13.6	13.5	13.5	13.5
90°	26.5	27.4	28.3	29.0	29.5	29.9	30.3	30.8
92.5°	40.9	41.7	42.4	42.6	42.3	42.1	41.7	41.5
95°	77.9	78.7	79.7	80.2	80.2	80.2	80.2	80.2
97.5°	121.0	122.2	123.2	123.7	123.6	123.5	123.4	123.3
100°	152.4	153.0	153.8	154.3	154.8	155.3	155.7	156.1
102.5°	188.5	189.3	190.0	190.2	190.1	190.0	190.0	189.9
105°	242.5	242.5	242.5	242.7	243.2	243.6	244.1	244.5
107.5°	300.9	301.6	302.3	302.5	302.3	302.0	301.7	301.4
110°	339.8	340.8	341.7	341.9	341.4	341.0	340.6	340.1





TEST NUMBER: P332445-927

CATALOG NUMBER: S123RDIW-S775D1320U927-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	378.8	379.9	381.0	381.5	381.4	381.4	381.3	381.2
115°	438.2	438.4	438.6	438.6	438.4	438.2	437.9	437.7
117.5°	498.0	498.0	497.9	497.6	496.9	496.3	495.7	495.0
120°	537.9	537.7	537.5	537.1	536.7	536.2	535.8	535.3
122.5°	578.3	577.7	577.1	576.5	575.8	575.2	574.6	573.9
125°	638.3	637.4	636.4	635.6	634.6	633.7	632.8	631.8
127.5°	697.5	696.2	695.0	693.8	692.8	691.7	690.7	689.6
130°	736.9	736.0	735.1	733.8	732.2	730.6	729.0	727.5
132.5°	775.2	774.0	773.0	771.8	770.6	769.4	768.1	766.9
135°	832.4	831.6	830.6	830.0	829.5	829.0	828.5	828.1
137.5°	888.4	887.5	886.5	885.7	884.8	883.9	883.0	882.2
140°	925.3	925.0	924.8	923.9	922.3	920.7	919.1	917.5
142.5°	959.8	959.6	959.3	958.6	957.4	956.2	954.9	953.7
145°	1010.5	1010.3	1010.1	1009.6	1008.6	1007.7	1006.8	1005.8
147.5°	1058.4	1058.4	1058.4	1057.8	1056.5	1055.0	1053.7	1052.3
150°	1088.1	1088.1	1088.1	1087.3	1086.0	1084.7	1083.2	1081.9
152.5°	1115.1	1115.5	1115.8	1115.4	1114.2	1113.0	1111.8	1110.6
155°	1154.6	1155.6	1156.4	1156.1	1154.5	1152.9	1151.3	1149.7
157.5°	1188.6	1189.5	1190.6	1190.3	1189.1	1187.8	1186.5	1185.3
160°	1209.5	1210.7	1211.8	1212.0	1211.0	1210.1	1209.2	1208.2
162.5°	1229.2	1230.4	1231.5	1231.4	1229.9	1228.4	1227.0	1225.5
165°	1254.2	1255.5	1256.9	1256.8	1255.2	1253.6	1252.0	1250.4
167.5°	1274.4	1275.8	1277.2	1277.2	1275.8	1274.4	1273.0	1271.5
170°	1285.5	1287.1	1288.6	1288.6	1287.1	1285.5	1283.8	1282.2
172.5°	1294.1	1295.5	1297.0	1296.9	1295.3	1293.6	1292.0	1290.5
175°	1303.5	1304.9	1306.2	1306.1	1304.5	1302.9	1301.3	1299.7
177.5°	1307.7	1308.8	1309.9	1309.8	1308.4	1307.2	1305.9	1304.6
180°	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0

(END OF REPORT)