

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: P332440-927

Luminaire Tested: **S123RDIW-S775D1030U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332440-927
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-S775D1030U927-4F0-1E-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: 5579.4 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: General Diffuse

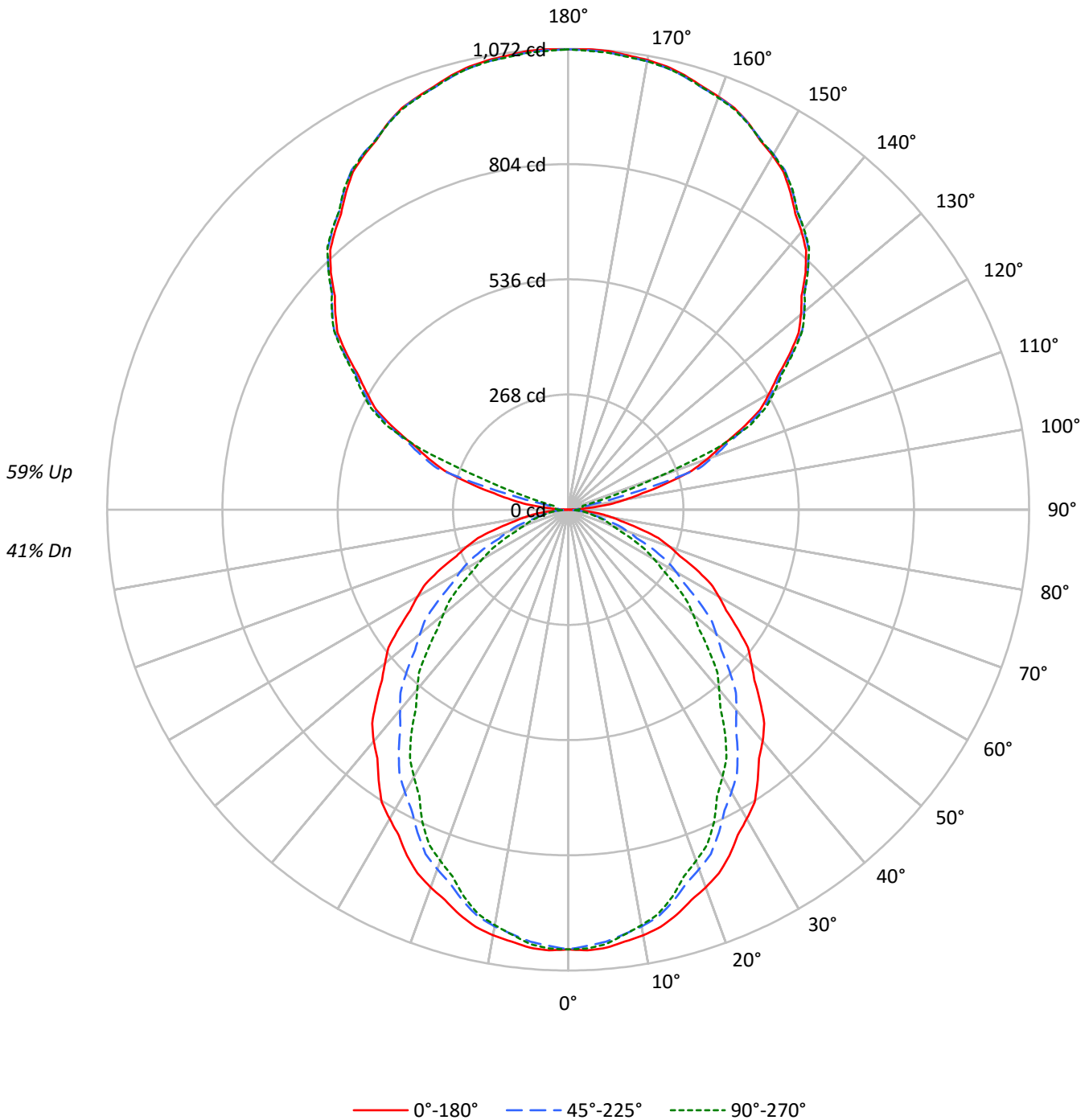
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332440-927

CATALOG NUMBER: S123RDIW-S775D1030U927-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P332440-927

CATALOG NUMBER: S123RDIW-S775D1030U927-4F0-1E-UDD-F

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°	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



TEST NUMBER: P332440-927

CATALOG NUMBER: S123RDIW-S775D1030U927-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.0	1.7
10°-20°	267.2	4.8
20°-30°	384.8	6.9
30°-40°	433.4	7.8
40°-50°	414.6	7.4
50°-60°	339.6	6.1
60°-70°	229.1	4.1
70°-80°	115.3	2.1
80°-90°	33.5	0.6
90°-100°	38.9	0.7
100°-110°	185.6	3.3
110°-120°	445.8	8.0
120°-130°	567.6	10.2
130°-140°	606.5	10.9
140°-150°	567.1	10.2
150°-160°	457.5	8.2
160°-170°	295.2	5.3
170°-180°	101.8	1.8
0°-30°	748.0	13.4
0°-40°	1181.5	21.2
0°-60°	1935.6	34.7
0°-90°	2313.5	41.5
90°-120°	670.3	12.0
90°-150°	2411.5	43.2
90°-180°	3266.0	58.5
0°-180°	5579.4	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	9	19	22	24	4
95°	49	18	25	30	30	60
105°	237	241	174	41	35	251
115°	445	450	457	464	468	439
125°	627	633	636	638	640	560
135°	780	785	788	791	788	601
145°	901	906	908	909	909	564
155°	992	991	991	995	991	457
165°	1046	1044	1043	1049	1044	295
175°	1071	1067	1068	1073	1067	102
180°	1071	1071	1071	1071	1071	



TEST NUMBER: P332440-927

CATALOG NUMBER: S123RDIW-S775D1030U927-4F0-1E-UDD-F

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°	16.1	14.8	13.5	12.3	11.0	10.6	11.1	11.6	12.0	12.4	12.4
90°	0.8	2.5	4.4	6.1	7.8	9.9	12.2	14.5	16.8	19.1	19.8
92.5°	14.8	14.3	13.8	13.3	12.8	13.5	15.2	16.9	18.6	20.4	21.5
95°	48.6	41.3	34.1	26.8	19.6	16.9	18.9	20.8	22.7	24.6	25.9
97.5°	97.5	94.3	91.0	87.8	84.5	76.5	63.8	51.1	38.3	25.6	27.0
100°	134.4	138.0	141.6	145.0	148.6	136.6	109.0	81.4	53.9	26.2	27.6
102.5°	176.5	179.0	181.6	184.1	186.6	172.9	142.8	112.6	82.5	52.4	48.0
105°	237.1	239.1	241.0	243.0	244.9	237.9	222.0	206.0	190.2	174.3	143.0
107.5°	301.1	302.6	304.2	305.8	307.3	309.3	311.9	314.3	316.9	319.4	296.4
110°	343.7	345.2	346.6	348.0	349.4	351.1	353.0	355.0	356.9	358.9	353.0



TEST NUMBER: P332440-927

CATALOG NUMBER: S123RDIW-S775D1030U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	384.4	385.7	387.0	388.3	389.6	391.2	393.1	395.1	397.0	398.9	399.0
115°	444.8	445.8	446.9	448.0	449.0	450.4	451.9	453.5	455.1	456.7	458.5
117.5°	503.2	504.5	505.8	507.1	508.4	509.5	510.3	511.1	511.9	512.7	514.1
120°	539.5	541.1	542.6	544.2	545.8	546.9	547.4	548.0	548.5	549.0	550.4
122.5°	576.4	577.7	579.0	580.3	581.6	582.6	583.3	583.9	584.6	585.3	586.3
125°	627.0	628.4	629.8	631.2	632.6	633.7	634.4	635.1	635.8	636.5	636.9
127.5°	676.0	677.4	678.8	680.2	681.7	682.8	683.7	684.5	685.3	686.2	686.7
130°	706.5	708.0	709.4	710.8	712.3	713.3	714.0	714.7	715.4	716.1	716.8
132.5°	735.9	737.3	738.6	740.1	741.5	742.5	743.1	743.6	744.2	744.7	745.4
135°	780.5	781.6	782.7	783.7	784.8	785.7	786.4	787.1	787.8	788.5	789.0
137.5°	818.7	820.1	821.4	822.8	824.1	825.0	825.4	825.8	826.2	826.6	827.4
140°	844.2	845.3	846.4	847.4	848.4	849.2	849.8	850.3	850.8	851.4	852.1
142.5°	867.8	868.8	869.9	870.9	872.0	872.8	873.3	873.9	874.4	874.9	875.5
145°	900.7	901.9	903.2	904.4	905.6	906.4	906.8	907.1	907.5	907.8	908.2
147.5°	931.8	932.6	933.3	934.1	935.0	935.6	935.9	936.3	936.6	937.0	937.3
150°	950.9	951.3	951.9	952.4	952.9	953.4	953.7	954.1	954.4	954.8	955.1
152.5°	968.0	968.3	968.5	968.8	969.0	969.2	969.5	969.6	969.9	970.1	970.7
155°	992.2	991.8	991.5	991.2	990.8	990.7	990.9	991.0	991.3	991.4	992.3
157.5°	1011.0	1011.0	1010.9	1010.9	1010.8	1010.7	1010.6	1010.3	1010.2	1010.0	1011.1
160°	1022.5	1022.2	1022.1	1021.9	1021.8	1021.5	1021.4	1021.2	1021.0	1020.9	1021.9
162.5°	1033.2	1032.8	1032.4	1031.9	1031.4	1031.1	1030.9	1030.8	1030.5	1030.4	1031.6
165°	1046.3	1045.8	1045.3	1044.7	1044.2	1043.9	1043.6	1043.5	1043.3	1043.1	1044.6
167.5°	1056.5	1055.8	1055.1	1054.4	1053.7	1053.3	1053.3	1053.3	1053.3	1053.3	1054.7
170°	1062.2	1061.5	1060.8	1060.1	1059.4	1059.1	1059.1	1059.1	1059.1	1059.1	1060.4
172.5°	1066.0	1065.2	1064.4	1063.5	1062.6	1062.3	1062.4	1062.6	1062.7	1062.9	1064.3
175°	1071.0	1070.1	1069.2	1068.3	1067.5	1067.1	1067.2	1067.5	1067.6	1067.8	1069.1
177.5°	1072.2	1071.5	1070.9	1070.2	1069.4	1069.1	1069.3	1069.4	1069.5	1069.7	1070.9
180°	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0



TEST NUMBER: P332440-927

CATALOG NUMBER: S123RDIW-S775D1030U927-4F0-1E-UDD-F

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°	12.4	12.4	12.4	12.4	12.3	12.2	12.1	12.0
90°	20.5	21.2	21.9	22.4	22.8	23.1	23.5	23.8
92.5°	22.7	23.8	24.9	25.6	25.7	26.0	26.2	26.4
95°	27.2	28.4	29.6	30.3	30.3	30.3	30.3	30.3
97.5°	28.4	29.9	31.3	32.1	32.2	32.4	32.6	32.8
100°	29.1	30.5	31.9	32.7	32.9	33.0	33.3	33.4
102.5°	43.6	39.2	34.8	32.8	33.1	33.4	33.7	34.1
105°	111.7	80.3	49.0	33.6	34.0	34.3	34.6	35.0
107.5°	273.5	250.6	227.6	204.3	180.7	157.2	133.6	110.0
110°	347.2	341.4	335.5	320.0	294.7	269.3	244.1	218.8



TEST NUMBER: P332440-927

CATALOG NUMBER: S123RDIW-S775D1030U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	399.2	399.3	399.3	396.7	391.4	386.1	380.7	375.4
115°	460.3	462.0	463.8	465.0	465.7	466.4	467.1	467.9
117.5°	515.6	517.0	518.4	519.2	519.3	519.4	519.6	519.8
120°	551.8	553.3	554.7	555.4	555.4	555.4	555.4	555.4
122.5°	587.2	588.3	589.2	589.9	589.9	590.1	590.3	590.4
125°	637.2	637.6	637.9	638.3	638.7	639.0	639.4	639.7
127.5°	687.3	687.9	688.5	688.6	688.2	687.9	687.5	687.1
130°	717.6	718.2	718.9	719.1	718.7	718.4	718.0	717.7
132.5°	746.2	746.9	747.6	747.7	747.2	746.7	746.2	745.7
135°	789.6	790.1	790.6	790.6	790.1	789.6	789.0	788.5
137.5°	828.2	829.1	830.0	830.2	829.8	829.5	829.1	828.8
140°	852.8	853.5	854.2	854.4	854.1	853.7	853.3	852.9
142.5°	876.1	876.6	877.2	877.2	876.7	876.2	875.8	875.2
145°	908.6	908.9	909.3	909.4	909.4	909.4	909.4	909.4
147.5°	937.7	938.0	938.4	938.2	937.4	936.5	935.7	934.9
150°	955.5	955.8	956.2	956.2	955.6	955.1	954.6	954.0
152.5°	971.4	972.0	972.6	972.6	971.7	970.9	970.1	969.3
155°	993.2	994.0	995.0	994.8	993.8	992.8	991.7	990.6
157.5°	1012.2	1013.2	1014.2	1014.1	1012.7	1011.4	1010.0	1008.6
160°	1022.9	1024.1	1025.1	1025.0	1023.7	1022.5	1021.3	1020.0
162.5°	1032.8	1034.0	1035.2	1035.2	1034.2	1033.1	1032.0	1030.9
165°	1045.9	1047.3	1048.8	1048.8	1047.7	1046.4	1045.1	1043.9
167.5°	1056.1	1057.6	1059.0	1059.0	1057.6	1056.1	1054.7	1053.3
170°	1061.8	1063.3	1064.7	1064.7	1063.3	1061.8	1060.4	1059.1
172.5°	1065.7	1067.1	1068.5	1068.4	1066.9	1065.3	1063.7	1062.2
175°	1070.2	1071.5	1072.8	1072.7	1071.3	1069.8	1068.4	1067.0
177.5°	1072.0	1073.1	1074.2	1074.1	1072.7	1071.3	1069.8	1068.4
180°	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0

(END OF REPORT)