

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: P331812

Luminaire Tested: **S122RDIW-S675D710U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331812
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDIW-S675D710U835-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 710 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4782.3 lumens
Efficiency: N/A
Efficacy: 106.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

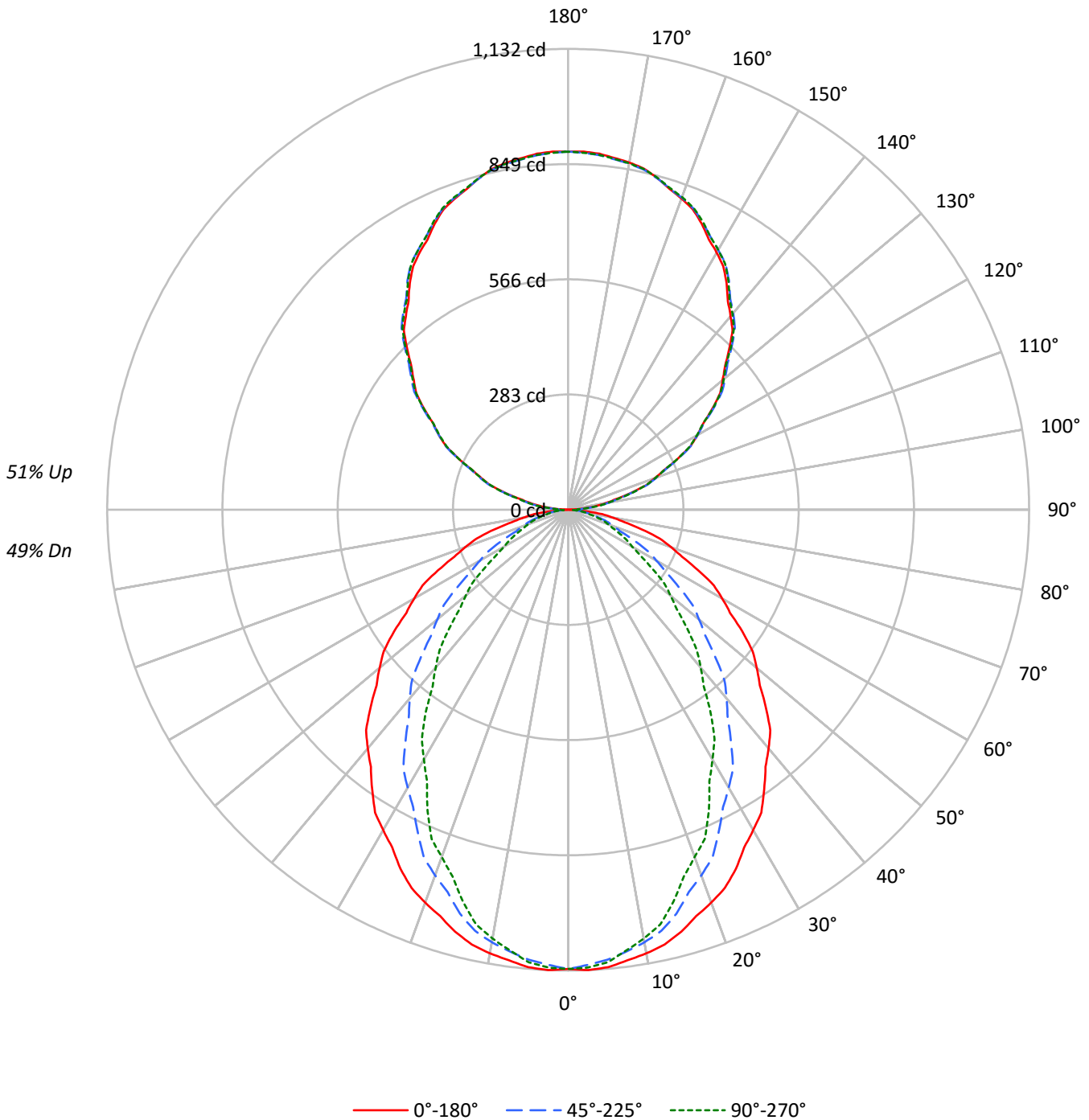
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20										
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	50	30	10	0														
RCR																																						
0	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49																				
1	98	94	90	87	90	87	83	80	73	71	69	61	59	58	49	48	47	42																				
2	90	82	77	72	82	76	71	67	65	61	58	54	51	49	44	42	40	36																				
3	82	73	66	60	75	67	61	56	57	53	49	48	45	42	39	37	35	31																				
4	75	65	57	51	69	60	53	48	51	46	42	43	39	36	35	33	31	27																				
5	69	58	50	44	64	54	47	42	46	41	37	39	35	32	32	29	27	24																				
6	64	52	44	39	59	49	42	36	42	36	32	35	31	28	29	26	24	21																				
7	59	47	39	34	54	44	37	32	38	32	29	32	28	25	27	24	21	19																				
8	55	43	35	30	51	40	33	29	35	29	25	30	25	22	25	22	19	17																				
9	51	39	32	27	47	37	30	26	32	27	23	27	23	20	23	20	18	15																				
10	48	36	29	24	44	34	27	23	29	24	21	25	21	18	21	18	16	14																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18213	18213	18213
5°	18282	17985	18084
10°	18143	17690	17539
15°	17934	17167	16672
20°	17646	16417	15593
25°	17350	15567	14549
30°	16940	14693	13209
35°	16539	13742	12033
40°	16136	12760	10671
45°	15664	11654	9439
50°	15179	10540	8231
55°	14686	9340	7068
60°	14108	8076	5867
65°	13456	6785	5345
70°	12675	5589	4914
75°	11715	5097	4585
80°	10349	4556	4175
85°	8133	3594	3594



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.6	2.2
10°-20°	289.9	6.1
20°-30°	407.1	8.5
30°-40°	443.9	9.3
40°-50°	408.2	8.5
50°-60°	320.6	6.7
60°-70°	209.0	4.4
70°-80°	107.8	2.3
80°-90°	31.5	0.7
90°-100°	55.7	1.2
100°-110°	173.1	3.6
110°-120°	295.8	6.2
120°-130°	389.0	8.1
130°-140°	436.6	9.1
140°-150°	428.1	9.0
150°-160°	359.1	7.5
160°-170°	238.2	5.0
170°-180°	83.2	1.7
0°-30°	802.6	16.8
0°-40°	1246.6	26.1
0°-60°	1975.3	41.3
0°-90°	2323.6	48.6
90°-120°	524.6	11.0
90°-150°	1778.3	37.2
90°-180°	2459.0	51.4
0°-180°	4782.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1128	1128	1128	1128	1128	
5°	1128	1122	1110	1118	1116	107
15°	1073	1060	1027	1008	997	302
25°	974	939	874	833	817	448
35°	839	785	697	635	610	525
45°	686	615	510	441	413	529
55°	522	440	332	273	251	466
65°	352	269	178	145	140	349
75°	188	118	82	75	74	199
85°	44	23	19	19	19	52
90°	1	10	26	25	25	4
95°	39	46	48	47	46	44
105°	160	162	163	165	165	168
115°	297	301	300	299	297	294
125°	432	438	436	434	433	386
135°	559	567	568	568	565	431
145°	678	683	688	688	686	424
155°	775	778	780	783	781	357
165°	844	843	843	848	844	238
175°	878	876	874	879	875	83
180°	879	879	879	879	879	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0
2.5°	1132.1	1131.2	1130.3	1129.4	1128.5	1127.0	1125.0	1123.0	1121.1	1119.1	1120.9
5°	1128.0	1126.9	1125.8	1124.6	1123.5	1121.5	1118.5	1115.6	1112.6	1109.7	1111.7
7.5°	1116.4	1115.0	1113.6	1112.2	1110.8	1108.3	1104.9	1101.5	1098.0	1094.6	1095.1
10°	1106.6	1105.0	1103.4	1101.8	1100.2	1097.2	1092.6	1088.1	1083.6	1079.0	1078.4
12.5°	1094.3	1092.4	1090.4	1088.5	1086.5	1082.7	1076.9	1071.1	1065.2	1059.4	1058.2
15°	1072.9	1070.4	1067.9	1065.4	1062.9	1057.8	1050.1	1042.4	1034.7	1027.0	1022.7
17.5°	1046.6	1042.8	1039.0	1035.1	1031.3	1024.5	1014.6	1004.7	994.8	984.9	979.8
20°	1027.0	1022.4	1017.9	1013.4	1008.8	1000.9	989.5	978.2	966.9	955.5	949.8
22.5°	1005.7	1000.7	995.6	990.5	985.4	976.5	963.7	950.9	938.1	925.3	918.0
25°	973.9	966.6	959.4	952.1	944.9	933.7	918.8	903.8	888.8	873.8	864.5
27.5°	935.5	927.6	919.7	911.8	903.9	891.5	874.7	857.8	840.9	824.0	813.2
30°	908.6	899.9	891.3	882.7	874.1	860.7	842.5	824.4	806.2	788.1	776.5
32.5°	882.4	872.3	862.3	852.2	842.1	827.8	809.3	790.8	772.3	753.8	740.6
35°	839.1	827.6	816.0	804.4	792.9	777.1	757.1	737.2	717.2	697.2	682.9
37.5°	795.9	783.1	770.4	757.7	745.0	728.0	706.8	685.5	664.2	642.9	627.2
40°	765.6	752.0	738.4	724.8	711.2	693.4	671.4	649.4	627.4	605.4	589.3
42.5°	734.6	720.3	705.9	691.6	677.3	658.7	636.0	613.3	590.5	567.8	551.1
45°	686.0	670.8	655.6	640.4	625.2	605.7	581.9	558.1	534.2	510.4	494.3
47.5°	638.6	622.5	606.4	590.3	574.2	553.9	529.3	504.7	480.1	455.5	439.5
50°	604.3	588.2	572.1	556.0	539.9	519.4	494.4	469.5	444.5	419.6	403.9
52.5°	570.9	554.0	537.2	520.4	503.5	482.9	458.5	434.1	409.7	385.3	370.2
55°	521.7	504.0	486.3	468.6	450.9	429.8	405.3	380.8	356.3	331.8	318.2
57.5°	471.2	453.1	434.9	416.8	398.6	377.8	354.2	330.7	307.1	283.6	271.1
60°	436.9	418.8	400.6	382.5	364.3	343.6	320.2	296.8	273.5	250.1	238.5
62.5°	403.4	385.3	367.1	349.0	330.8	310.6	288.4	266.1	243.8	221.5	210.5
65°	352.2	333.8	315.4	297.1	278.7	259.3	238.9	218.5	198.0	177.6	169.9
67.5°	302.8	284.5	266.3	248.1	229.8	211.5	193.1	174.8	156.4	138.0	134.5
70°	268.5	250.8	233.1	215.4	197.7	181.0	165.4	149.7	134.1	118.4	116.1
72.5°	235.8	218.8	201.9	184.9	167.9	153.2	140.6	128.0	115.5	102.9	101.0
75°	187.8	172.0	156.1	140.2	124.3	112.5	104.8	97.1	89.4	81.7	80.1
77.5°	140.7	126.7	112.8	98.9	85.0	76.1	72.4	68.7	65.0	61.3	60.3
80°	111.3	99.7	88.1	76.6	65.0	58.1	55.8	53.5	51.3	49.0	48.1
82.5°	84.3	75.3	66.3	57.2	48.2	42.9	41.4	39.8	38.3	36.8	36.2
85°	43.9	39.1	34.4	29.6	24.8	22.1	21.4	20.8	20.1	19.4	19.4
87.5°	13.2	12.2	11.1	10.0	9.0	8.8	9.6	10.3	11.0	11.7	11.5
90°	0.7	2.7	4.7	6.7	8.7	11.5	15.1	18.7	22.3	26.0	25.6
92.5°	13.2	14.7	16.1	17.6	19.0	20.2	21.0	21.9	22.7	23.6	23.7
95°	38.6	40.2	41.9	43.5	45.2	46.2	46.5	46.8	47.2	47.5	47.5
97.5°	70.5	71.9	73.4	74.8	76.3	77.3	78.0	78.6	79.2	79.8	79.8
100°	94.2	95.6	96.9	98.2	99.5	100.4	100.9	101.4	101.9	102.4	102.4
102.5°	119.2	120.2	121.3	122.3	123.4	124.2	124.9	125.5	126.1	126.7	126.9
105°	159.5	160.0	160.5	161.0	161.5	161.9	162.3	162.6	162.9	163.3	163.6
107.5°	200.2	200.9	201.7	202.4	203.1	203.5	203.5	203.5	203.5	203.5	203.6
110°	226.3	227.3	228.3	229.3	230.3	230.8	230.8	230.8	230.8	230.8	230.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	254.8	255.8	256.8	257.8	258.8	259.2	259.1	258.9	258.8	258.7	258.3
115°	296.8	297.8	298.8	299.8	300.8	301.1	300.8	300.4	300.1	299.8	299.6
117.5°	338.7	340.0	341.3	342.6	343.9	344.1	343.2	342.3	341.4	340.5	340.1
120°	366.6	367.9	369.2	370.5	371.8	371.8	370.5	369.2	367.9	366.6	366.6
122.5°	392.1	393.7	395.3	396.8	398.4	398.8	397.8	396.9	396.0	395.1	394.7
125°	431.9	433.4	434.8	436.3	437.8	438.3	437.8	437.3	436.8	436.3	435.8
127.5°	470.6	472.5	474.4	476.2	478.1	478.8	478.2	477.6	477.0	476.4	475.8
130°	494.9	497.1	499.2	501.4	503.5	504.4	504.1	503.8	503.4	503.1	502.8
132.5°	522.3	524.0	525.8	527.5	529.2	530.2	530.2	530.3	530.4	530.4	529.7
135°	558.8	560.6	562.4	564.2	566.0	567.1	567.4	567.8	568.1	568.4	568.2
137.5°	597.2	598.7	600.2	601.7	603.1	604.1	604.5	605.0	605.4	605.8	605.7
140°	620.4	621.8	623.3	624.8	626.3	627.4	628.3	629.1	629.9	630.7	630.7
142.5°	644.1	645.6	647.1	648.6	650.0	651.1	651.6	652.2	652.7	653.3	653.4
145°	678.2	679.4	680.5	681.7	682.9	683.9	684.9	685.9	686.9	687.9	688.0
147.5°	708.7	710.0	711.4	712.8	714.2	715.2	715.9	716.5	717.2	717.9	718.2
150°	729.4	730.4	731.4	732.4	733.4	734.2	734.9	735.5	736.2	736.9	737.4
152.5°	747.8	748.8	749.8	750.8	751.8	752.7	753.5	754.3	755.1	755.9	756.5
155°	775.4	775.9	776.4	776.9	777.4	777.9	778.4	778.9	779.4	779.9	780.7
157.5°	799.0	799.4	799.7	800.0	800.4	800.7	801.0	801.3	801.6	801.9	803.0
160°	813.3	813.6	813.9	814.3	814.6	814.9	815.0	815.2	815.3	815.5	816.5
162.5°	826.3	826.4	826.5	826.5	826.6	826.7	826.9	827.1	827.2	827.4	828.5
165°	843.7	843.5	843.4	843.2	843.1	843.0	843.0	843.0	843.0	843.0	844.1
167.5°	858.3	857.8	857.3	856.8	856.3	856.0	856.0	855.9	855.9	855.9	857.0
170°	866.0	865.5	865.0	864.5	864.0	863.7	863.5	863.3	863.2	863.0	864.2
172.5°	871.3	870.8	870.3	869.8	869.3	869.0	868.8	868.7	868.5	868.3	869.5
175°	877.8	877.4	876.9	876.4	875.9	875.5	875.1	874.8	874.5	874.1	875.3
177.5°	880.5	880.1	879.7	879.3	878.9	878.6	878.3	878.1	877.8	877.5	878.3
180°	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0
2.5°	1122.7	1124.5	1126.3	1127.0	1126.7	1126.3	1126.0	1125.6
5°	1113.7	1115.8	1117.8	1118.5	1117.8	1117.1	1116.5	1115.8
7.5°	1095.7	1096.3	1096.9	1096.6	1095.4	1094.3	1093.1	1091.9
10°	1077.7	1077.0	1076.3	1075.3	1073.9	1072.6	1071.2	1069.8
12.5°	1057.0	1055.8	1054.5	1052.8	1050.5	1048.3	1046.0	1043.7
15°	1018.4	1014.0	1009.7	1006.4	1004.2	1001.9	999.6	997.4
17.5°	974.7	969.5	964.4	959.9	956.0	952.1	948.2	944.3
20°	944.2	938.5	932.8	927.5	922.5	917.5	912.5	907.5
22.5°	910.7	903.4	896.1	890.6	886.8	883.1	879.4	875.7
25°	855.2	845.9	836.6	830.3	826.9	823.5	820.1	816.7
27.5°	802.3	791.5	780.7	772.5	767.1	761.7	756.3	750.9
30°	765.0	753.4	741.8	733.0	726.8	720.7	714.6	708.5
32.5°	727.4	714.2	701.0	691.5	685.7	680.0	674.2	668.5
35°	668.7	654.4	640.1	630.4	625.4	620.4	615.5	610.5
37.5°	611.4	595.7	580.0	569.2	563.5	557.8	552.1	546.4
40°	573.1	557.0	540.9	529.9	524.0	518.1	512.2	506.3
42.5°	534.5	517.8	501.2	490.0	484.3	478.6	472.9	467.1
45°	478.2	462.1	446.0	435.2	429.8	424.3	418.9	413.4
47.5°	423.5	407.5	391.4	381.0	376.0	371.1	366.1	361.2
50°	388.3	372.6	357.0	346.7	342.0	337.2	332.5	327.7
52.5°	355.1	339.9	324.8	315.1	310.7	306.3	301.9	297.5
55°	304.6	290.9	277.3	268.4	264.1	259.7	255.4	251.1
57.5°	258.6	246.2	233.7	225.6	222.0	218.4	214.7	211.1
60°	227.0	215.4	203.8	196.2	192.6	189.0	185.3	181.7
62.5°	199.5	188.4	177.4	170.8	168.6	166.5	164.3	162.1
65°	162.2	154.5	146.8	142.6	141.9	141.2	140.5	139.9
67.5°	130.9	127.4	123.9	121.7	121.0	120.3	119.6	118.8
70°	113.9	111.6	109.3	107.8	106.8	105.9	105.0	104.1
72.5°	99.1	97.2	95.3	94.1	93.5	93.0	92.4	91.9
75°	78.5	76.9	75.3	74.4	74.2	74.0	73.7	73.5
77.5°	59.4	58.5	57.6	57.0	56.6	56.3	55.9	55.5
80°	47.2	46.3	45.4	44.9	44.9	44.9	44.9	44.9
82.5°	35.7	35.1	34.6	34.3	34.3	34.3	34.3	34.3
85°	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4
87.5°	11.2	11.0	10.7	10.6	10.7	10.7	10.7	10.8
90°	25.3	25.0	24.7	24.6	24.7	24.9	25.1	25.2
92.5°	23.7	23.8	23.9	23.9	23.9	24.0	24.0	24.0
95°	47.5	47.5	47.5	47.3	47.0	46.7	46.3	46.0
97.5°	79.8	79.8	79.8	79.8	79.8	79.8	79.7	79.7
100°	102.4	102.4	102.4	102.3	102.2	102.0	101.8	101.7
102.5°	127.0	127.1	127.3	127.3	127.1	126.9	126.8	126.6
105°	163.9	164.2	164.6	164.7	164.7	164.7	164.7	164.7
107.5°	203.7	203.9	204.0	203.7	202.9	202.2	201.4	200.7
110°	230.8	230.8	230.8	230.5	230.0	229.5	229.0	228.6



TEST NUMBER: P331812

CATALOG NUMBER: S122RDIW-S675D710U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	257.9	257.5	257.1	256.7	256.4	256.0	255.6	255.3
115°	299.5	299.3	299.1	298.8	298.3	297.8	297.3	296.8
117.5°	339.7	339.3	338.9	338.4	337.9	337.4	336.9	336.4
120°	366.6	366.6	366.6	366.3	365.8	365.3	364.8	364.3
122.5°	394.3	393.9	393.5	393.1	392.7	392.4	392.0	391.7
125°	435.3	434.8	434.3	434.0	433.9	433.7	433.5	433.4
127.5°	475.2	474.6	474.0	473.5	472.9	472.4	471.9	471.4
130°	502.5	502.1	501.8	501.3	500.6	500.0	499.3	498.7
132.5°	529.0	528.2	527.5	526.9	526.4	525.8	525.3	524.8
135°	568.1	567.9	567.8	567.4	566.9	566.4	565.9	565.4
137.5°	605.5	605.4	605.3	604.9	604.2	603.6	602.9	602.2
140°	630.7	630.7	630.7	630.4	629.8	629.1	628.4	627.8
142.5°	653.6	653.7	653.8	653.6	652.9	652.2	651.6	650.9
145°	688.2	688.4	688.5	688.3	687.6	687.0	686.3	685.7
147.5°	718.6	718.9	719.3	719.2	718.6	717.9	717.3	716.7
150°	737.8	738.3	738.8	738.8	738.3	737.8	737.4	736.9
152.5°	757.1	757.7	758.4	758.4	757.7	757.1	756.5	755.9
155°	781.5	782.4	783.2	783.4	782.9	782.4	781.9	781.4
157.5°	804.1	805.2	806.3	806.5	805.7	804.9	804.1	803.3
160°	817.5	818.5	819.5	819.6	819.0	818.3	817.7	817.0
162.5°	829.6	830.8	831.9	832.0	831.2	830.5	829.7	828.9
165°	845.3	846.4	847.6	847.8	846.9	846.1	845.3	844.5
167.5°	858.2	859.3	860.5	860.6	859.8	858.9	858.1	857.2
170°	865.3	866.5	867.6	867.7	866.7	865.7	864.7	863.7
172.5°	870.7	871.8	873.0	873.0	872.1	871.1	870.1	869.1
175°	876.4	877.6	878.8	878.8	877.8	876.9	875.9	874.9
177.5°	879.1	879.9	880.7	880.7	879.9	879.1	878.3	877.5
180°	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3

(END OF REPORT)