

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: P331812-830

Luminaire Tested: **S122RDIW-S675D710U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331812-830
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-S675D710U830-4F0-1E-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: 4507.6 lumens
Efficiency: N/A
Efficacy: 100.2 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

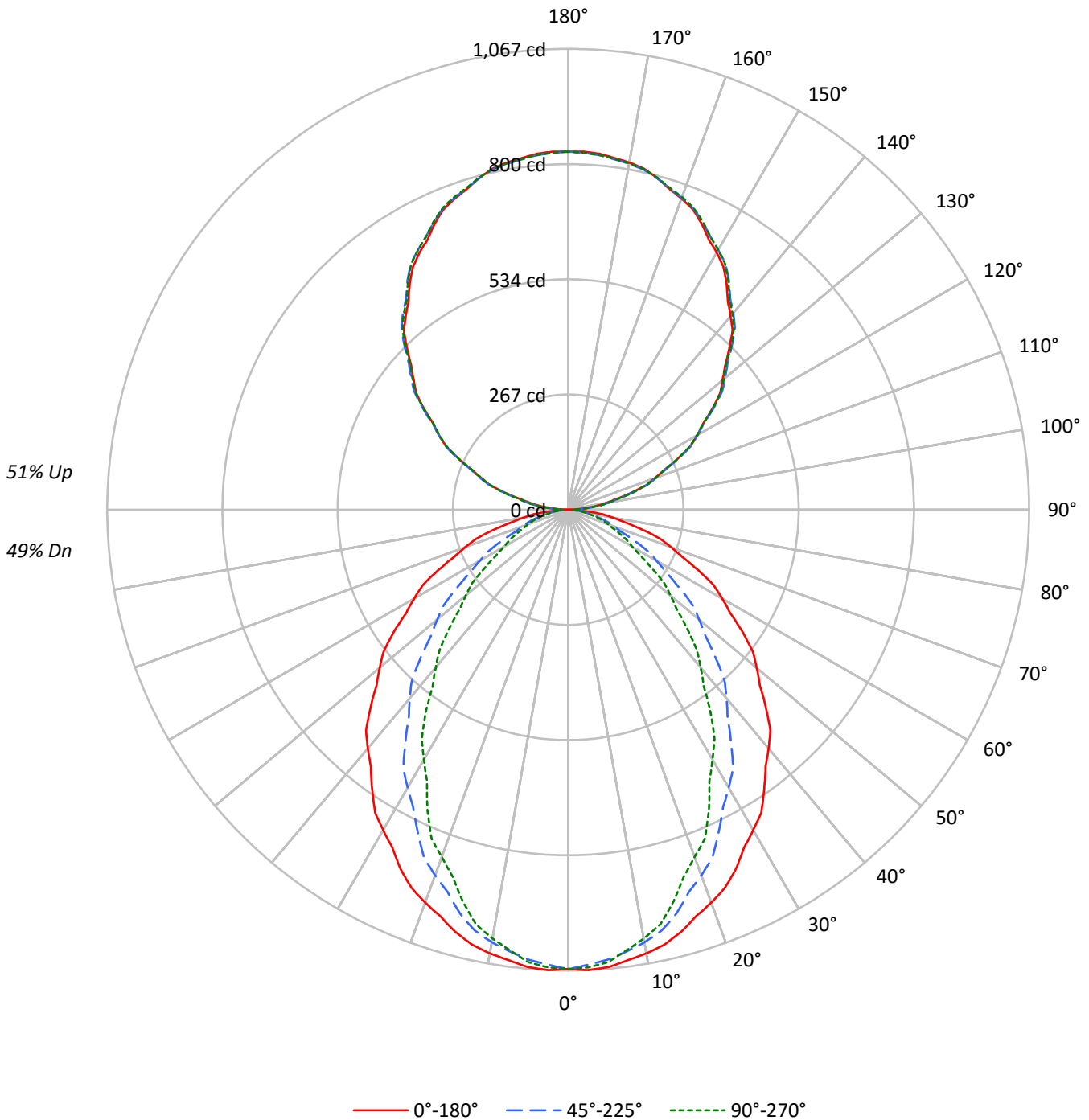
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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	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°	17166	17166	17166
5°	17232	16951	17045
10°	17100	16674	16531
15°	16904	16181	15714
20°	16632	15474	14698
25°	16352	14672	13714
30°	15966	13848	12450
35°	15589	12952	11341
40°	15209	12026	10058
45°	14764	10985	8896
50°	14307	9934	7759
55°	13841	8802	6663
60°	13298	7611	5532
65°	12684	6395	5039
70°	11948	5268	4631
75°	11042	4803	4323
80°	9754	4296	3933
85°	7669	3390	3390



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.5	2.2
10°-20°	273.3	6.1
20°-30°	383.7	8.5
30°-40°	418.4	9.3
40°-50°	384.7	8.5
50°-60°	302.2	6.7
60°-70°	197.0	4.4
70°-80°	101.6	2.3
80°-90°	29.7	0.7
90°-100°	52.5	1.2
100°-110°	163.1	3.6
110°-120°	278.8	6.2
120°-130°	366.6	8.1
130°-140°	411.5	9.1
140°-150°	403.5	9.0
150°-160°	338.4	7.5
160°-170°	224.5	5.0
170°-180°	78.5	1.7
0°-30°	756.5	16.8
0°-40°	1174.9	26.1
0°-60°	1861.8	41.3
0°-90°	2190.1	48.6
90°-120°	494.4	11.0
90°-150°	1676.1	37.2
90°-180°	2317.0	51.4
0°-180°	4507.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1063	1063	1063	1063	1063	
5°	1063	1058	1046	1054	1052	101
15°	1011	999	968	950	940	285
25°	918	885	824	786	770	422
35°	791	740	657	599	575	495
45°	647	580	481	415	390	499
55°	492	415	313	257	237	439
65°	332	254	167	136	132	329
75°	177	112	77	71	69	187
85°	41	22	18	18	18	49
90°	1	10	24	23	24	4
95°	36	43	45	45	43	42
105°	150	152	154	155	155	159
115°	280	284	283	282	280	277
125°	407	413	411	409	408	364
135°	527	534	536	535	533	407
145°	639	644	648	649	646	399
155°	731	733	735	738	736	336
165°	795	795	795	799	796	224
175°	827	825	824	828	825	79
180°	829	829	829	829	829	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2
2.5°	1067.1	1066.2	1065.4	1064.5	1063.7	1062.2	1060.4	1058.5	1056.7	1054.8	1056.5
5°	1063.2	1062.2	1061.1	1060.0	1058.9	1057.1	1054.2	1051.5	1048.7	1045.9	1047.8
7.5°	1052.3	1050.9	1049.6	1048.3	1047.0	1044.6	1041.4	1038.2	1034.9	1031.7	1032.2
10°	1043.0	1041.5	1040.0	1038.5	1037.0	1034.2	1029.8	1025.6	1021.3	1017.0	1016.4
12.5°	1031.4	1029.6	1027.7	1026.0	1024.1	1020.5	1015.0	1009.6	1004.0	998.5	997.4
15°	1011.3	1008.9	1006.5	1004.2	1001.8	997.0	989.8	982.5	975.2	968.0	963.9
17.5°	986.5	982.9	979.3	975.6	972.0	965.6	956.3	947.0	937.6	928.3	923.5
20°	968.0	963.7	959.4	955.2	950.8	943.4	932.6	922.0	911.3	900.6	895.2
22.5°	947.9	943.2	938.4	933.6	928.8	920.4	908.3	896.3	884.2	872.1	865.3
25°	917.9	911.1	904.3	897.4	890.6	880.1	866.0	851.9	837.7	823.6	814.8
27.5°	881.7	874.3	866.9	859.4	852.0	840.3	824.4	808.5	792.6	776.7	766.5
30°	856.4	848.2	840.1	832.0	823.9	811.2	794.1	777.0	759.9	742.8	731.9
32.5°	831.7	822.2	812.8	803.2	793.7	780.2	762.8	745.4	727.9	710.5	698.0
35°	790.9	780.0	769.1	758.2	747.3	732.4	713.6	694.8	676.0	657.1	643.7
37.5°	750.2	738.1	726.1	714.2	702.2	686.2	666.2	646.1	626.0	606.0	591.2
40°	721.6	708.8	696.0	683.2	670.3	653.6	632.8	612.1	591.4	570.6	555.4
42.5°	692.4	678.9	665.3	651.9	638.4	620.9	599.5	578.1	556.6	535.2	519.4
45°	646.6	632.3	617.9	603.6	589.3	570.9	548.5	526.0	503.5	481.1	465.9
47.5°	601.9	586.7	571.6	556.4	541.2	522.1	498.9	475.7	452.5	429.3	414.2
50°	569.6	554.4	539.2	524.1	508.9	489.6	466.0	442.5	419.0	395.5	380.7
52.5°	538.1	522.2	506.3	490.5	474.6	455.2	432.2	409.2	386.2	363.2	348.9
55°	491.7	475.0	458.4	441.7	425.0	405.1	382.0	358.9	335.8	312.7	299.9
57.5°	444.1	427.1	409.9	392.9	375.7	356.1	333.8	311.7	289.5	267.3	255.5
60°	411.8	394.7	377.6	360.5	343.4	323.9	301.8	279.7	257.8	235.7	224.8
62.5°	380.2	363.2	346.0	328.9	311.8	292.8	271.8	250.8	229.8	208.8	198.4
65°	332.0	314.6	297.3	280.0	262.7	244.4	225.2	205.9	186.6	167.4	160.1
67.5°	285.4	268.2	251.0	233.8	216.6	199.3	182.0	164.8	147.4	130.1	126.8
70°	253.1	236.4	219.7	203.0	186.3	170.6	155.9	141.1	126.4	111.6	109.4
72.5°	222.3	206.2	190.3	174.3	158.3	144.4	132.5	120.6	108.9	97.0	95.2
75°	177.0	162.1	147.1	132.1	117.2	106.0	98.8	91.5	84.3	77.0	75.5
77.5°	132.6	119.4	106.3	93.2	80.1	71.7	68.2	64.8	61.3	57.8	56.8
80°	104.9	94.0	83.0	72.2	61.3	54.8	52.6	50.4	48.4	46.2	45.3
82.5°	79.5	71.0	62.5	53.9	45.4	40.4	39.0	37.5	36.1	34.7	34.1
85°	41.4	36.9	32.4	27.9	23.4	20.8	20.2	19.6	18.9	18.3	18.3
87.5°	12.4	11.5	10.5	9.4	8.5	8.3	9.0	9.7	10.4	11.0	10.8
90°	0.7	2.5	4.4	6.3	8.2	10.8	14.2	17.6	21.0	24.5	24.1
92.5°	12.4	13.9	15.2	16.6	17.9	19.0	19.8	20.6	21.4	22.2	22.3
95°	36.4	37.9	39.5	41.0	42.6	43.5	43.8	44.1	44.5	44.8	44.8
97.5°	66.4	67.8	69.2	70.5	71.9	72.9	73.5	74.1	74.6	75.2	75.2
100°	88.8	90.1	91.3	92.6	93.8	94.6	95.1	95.6	96.0	96.5	96.5
102.5°	112.4	113.3	114.3	115.3	116.3	117.1	117.7	118.3	118.9	119.4	119.6
105°	150.3	150.8	151.3	151.7	152.2	152.6	153.0	153.3	153.5	153.9	154.2
107.5°	188.7	189.4	190.1	190.8	191.4	191.8	191.8	191.8	191.8	191.8	191.9
110°	213.3	214.2	215.2	216.1	217.1	217.5	217.5	217.5	217.5	217.5	217.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	240.2	241.1	242.0	243.0	243.9	244.3	244.2	244.0	243.9	243.8	243.5
115°	279.7	280.7	281.6	282.6	283.5	283.8	283.5	283.1	282.9	282.6	282.4
117.5°	319.2	320.5	321.7	322.9	324.1	324.3	323.5	322.6	321.8	320.9	320.6
120°	345.5	346.8	348.0	349.2	350.4	350.4	349.2	348.0	346.8	345.5	345.5
122.5°	369.6	371.1	372.6	374.0	375.5	375.9	374.9	374.1	373.2	372.4	372.0
125°	407.1	408.5	409.8	411.2	412.6	413.1	412.6	412.2	411.7	411.2	410.8
127.5°	443.6	445.4	447.1	448.8	450.6	451.3	450.7	450.2	449.6	449.0	448.5
130°	466.5	468.5	470.5	472.6	474.6	475.4	475.1	474.9	474.5	474.2	473.9
132.5°	492.3	493.9	495.6	497.2	498.8	499.7	499.7	499.8	499.9	499.9	499.3
135°	526.7	528.4	530.1	531.8	533.5	534.5	534.8	535.2	535.5	535.7	535.6
137.5°	562.9	564.3	565.7	567.1	568.4	569.4	569.8	570.2	570.6	571.0	570.9
140°	584.8	586.1	587.5	588.9	590.3	591.4	592.2	593.0	593.7	594.5	594.5
142.5°	607.1	608.5	609.9	611.3	612.7	613.7	614.2	614.7	615.2	615.8	615.9
145°	639.2	640.4	641.4	642.5	643.7	644.6	645.5	646.5	647.4	648.4	648.5
147.5°	668.0	669.2	670.5	671.8	673.2	674.1	674.8	675.3	676.0	676.7	676.9
150°	687.5	688.4	689.4	690.3	691.3	692.0	692.7	693.2	693.9	694.6	695.0
152.5°	704.8	705.8	706.7	707.7	708.6	709.5	710.2	711.0	711.7	712.5	713.0
155°	730.8	731.3	731.8	732.3	732.7	733.2	733.7	734.1	734.6	735.1	735.8
157.5°	753.1	753.5	753.8	754.0	754.4	754.7	755.0	755.3	755.5	755.8	756.9
160°	766.6	766.9	767.1	767.5	767.8	768.1	768.2	768.4	768.5	768.6	769.6
162.5°	778.8	778.9	779.0	779.0	779.1	779.2	779.4	779.6	779.7	779.9	780.9
165°	795.2	795.0	794.9	794.8	794.7	794.6	794.6	794.6	794.6	794.6	795.6
167.5°	809.0	808.5	808.0	807.6	807.1	806.8	806.8	806.7	806.7	806.7	807.8
170°	816.2	815.8	815.3	814.8	814.4	814.1	813.9	813.7	813.6	813.4	814.5
172.5°	821.2	820.8	820.3	819.8	819.4	819.1	818.9	818.8	818.6	818.4	819.5
175°	827.4	827.0	826.5	826.0	825.6	825.2	824.8	824.5	824.3	823.9	825.0
177.5°	829.9	829.5	829.2	828.8	828.4	828.1	827.8	827.6	827.4	827.1	827.8
180°	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2
2.5°	1058.2	1059.9	1061.6	1062.2	1062.0	1061.6	1061.3	1060.9
5°	1049.7	1051.7	1053.6	1054.2	1053.6	1052.9	1052.3	1051.7
7.5°	1032.7	1033.3	1033.9	1033.6	1032.5	1031.4	1030.3	1029.2
10°	1015.8	1015.1	1014.5	1013.5	1012.2	1011.0	1009.7	1008.3
12.5°	996.3	995.1	993.9	992.3	990.1	988.1	985.9	983.7
15°	959.9	955.7	951.7	948.6	946.5	944.3	942.2	940.1
17.5°	918.7	913.8	909.0	904.7	901.1	897.4	893.7	890.0
20°	889.9	884.6	879.2	874.2	869.5	864.8	860.1	855.4
22.5°	858.4	851.5	844.6	839.4	835.8	832.4	828.9	825.4
25°	806.1	797.3	788.5	782.6	779.4	776.2	773.0	769.8
27.5°	756.2	746.0	735.8	728.1	723.0	717.9	712.8	707.8
30°	721.0	710.1	699.2	690.9	685.0	679.3	673.5	667.8
32.5°	685.6	673.2	660.7	651.8	646.3	640.9	635.5	630.1
35°	630.3	616.8	603.3	594.2	589.5	584.8	580.1	575.4
37.5°	576.3	561.5	546.7	536.5	531.1	525.8	520.4	515.0
40°	540.2	525.0	509.8	499.5	493.9	488.3	482.8	477.2
42.5°	503.8	488.0	472.4	461.8	456.5	451.1	445.7	440.3
45°	450.7	435.5	420.4	410.2	405.1	399.9	394.8	389.6
47.5°	399.2	384.1	368.9	359.1	354.4	349.8	345.1	340.4
50°	366.0	351.2	336.5	326.8	322.3	317.8	313.4	308.9
52.5°	334.7	320.4	306.1	297.0	292.8	288.7	284.6	280.4
55°	287.1	274.2	261.4	253.0	248.9	244.8	240.7	236.7
57.5°	243.7	232.1	220.3	212.6	209.2	205.9	202.4	199.0
60°	214.0	203.0	192.1	184.9	181.5	178.1	174.7	171.3
62.5°	188.0	177.6	167.2	161.0	158.9	156.9	154.9	152.8
65°	152.9	145.6	138.4	134.4	133.7	133.1	132.4	131.9
67.5°	123.4	120.1	116.8	114.7	114.0	113.4	112.7	112.0
70°	107.4	105.2	103.0	101.6	100.7	99.8	99.0	98.1
72.5°	93.4	91.6	89.8	88.7	88.1	87.7	87.1	86.6
75°	74.0	72.5	71.0	70.1	69.9	69.7	69.5	69.3
77.5°	56.0	55.1	54.3	53.7	53.3	53.1	52.7	52.3
80°	44.5	43.6	42.8	42.3	42.3	42.3	42.3	42.3
82.5°	33.6	33.1	32.6	32.3	32.3	32.3	32.3	32.3
85°	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3
87.5°	10.6	10.4	10.1	10.0	10.1	10.1	10.1	10.2
90°	23.8	23.6	23.3	23.2	23.3	23.5	23.7	23.8
92.5°	22.3	22.4	22.5	22.5	22.5	22.6	22.6	22.6
95°	44.8	44.8	44.8	44.6	44.3	44.0	43.6	43.4
97.5°	75.2	75.2	75.2	75.2	75.2	75.2	75.1	75.1
100°	96.5	96.5	96.5	96.4	96.3	96.1	96.0	95.9
102.5°	119.7	119.8	120.0	120.0	119.8	119.6	119.5	119.3
105°	154.5	154.8	155.1	155.2	155.2	155.2	155.2	155.2
107.5°	192.0	192.2	192.3	192.0	191.2	190.6	189.8	189.2
110°	217.5	217.5	217.5	217.3	216.8	216.3	215.8	215.5



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CATALOG NUMBER: S122RDIW-S675D710U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	243.1	242.7	242.3	242.0	241.7	241.3	240.9	240.6
115°	282.3	282.1	281.9	281.6	281.2	280.7	280.2	279.7
117.5°	320.2	319.8	319.4	319.0	318.5	318.0	317.5	317.1
120°	345.5	345.5	345.5	345.3	344.8	344.3	343.8	343.4
122.5°	371.6	371.3	370.9	370.5	370.1	369.9	369.5	369.2
125°	410.3	409.8	409.3	409.1	409.0	408.8	408.6	408.5
127.5°	447.9	447.3	446.8	446.3	445.7	445.3	444.8	444.3
130°	473.6	473.3	473.0	472.5	471.8	471.3	470.6	470.0
132.5°	498.6	497.9	497.2	496.6	496.2	495.6	495.1	494.6
135°	535.5	535.3	535.2	534.8	534.3	533.9	533.4	532.9
137.5°	570.7	570.6	570.5	570.1	569.5	568.9	568.3	567.6
140°	594.5	594.5	594.5	594.2	593.6	593.0	592.3	591.7
142.5°	616.0	616.1	616.2	616.0	615.4	614.7	614.2	613.5
145°	648.7	648.8	648.9	648.8	648.1	647.5	646.9	646.3
147.5°	677.3	677.6	678.0	677.9	677.3	676.7	676.1	675.5
150°	695.4	695.9	696.4	696.4	695.9	695.4	695.0	694.6
152.5°	713.6	714.2	714.8	714.8	714.2	713.6	713.0	712.5
155°	736.6	737.4	738.2	738.4	737.9	737.4	737.0	736.5
157.5°	757.9	758.9	760.0	760.2	759.4	758.7	757.9	757.1
160°	770.5	771.5	772.4	772.5	771.9	771.3	770.7	770.1
162.5°	781.9	783.1	784.1	784.2	783.4	782.8	782.0	781.3
165°	796.7	797.8	798.9	799.1	798.2	797.5	796.7	796.0
167.5°	808.9	809.9	811.1	811.2	810.4	809.5	808.8	807.9
170°	815.6	816.7	817.7	817.8	816.9	816.0	815.0	814.1
172.5°	820.7	821.7	822.8	822.8	822.0	821.0	820.1	819.2
175°	826.0	827.2	828.3	828.3	827.4	826.5	825.6	824.6
177.5°	828.6	829.3	830.1	830.1	829.3	828.6	827.8	827.1
180°	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8

(END OF REPORT)