

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: P331536

Luminaire Tested: **S122DIW-S675D710U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331536
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: S122DIW-S675D710U835-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 710 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5163.3 lumens
Efficiency: N/A
Efficacy: 114.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

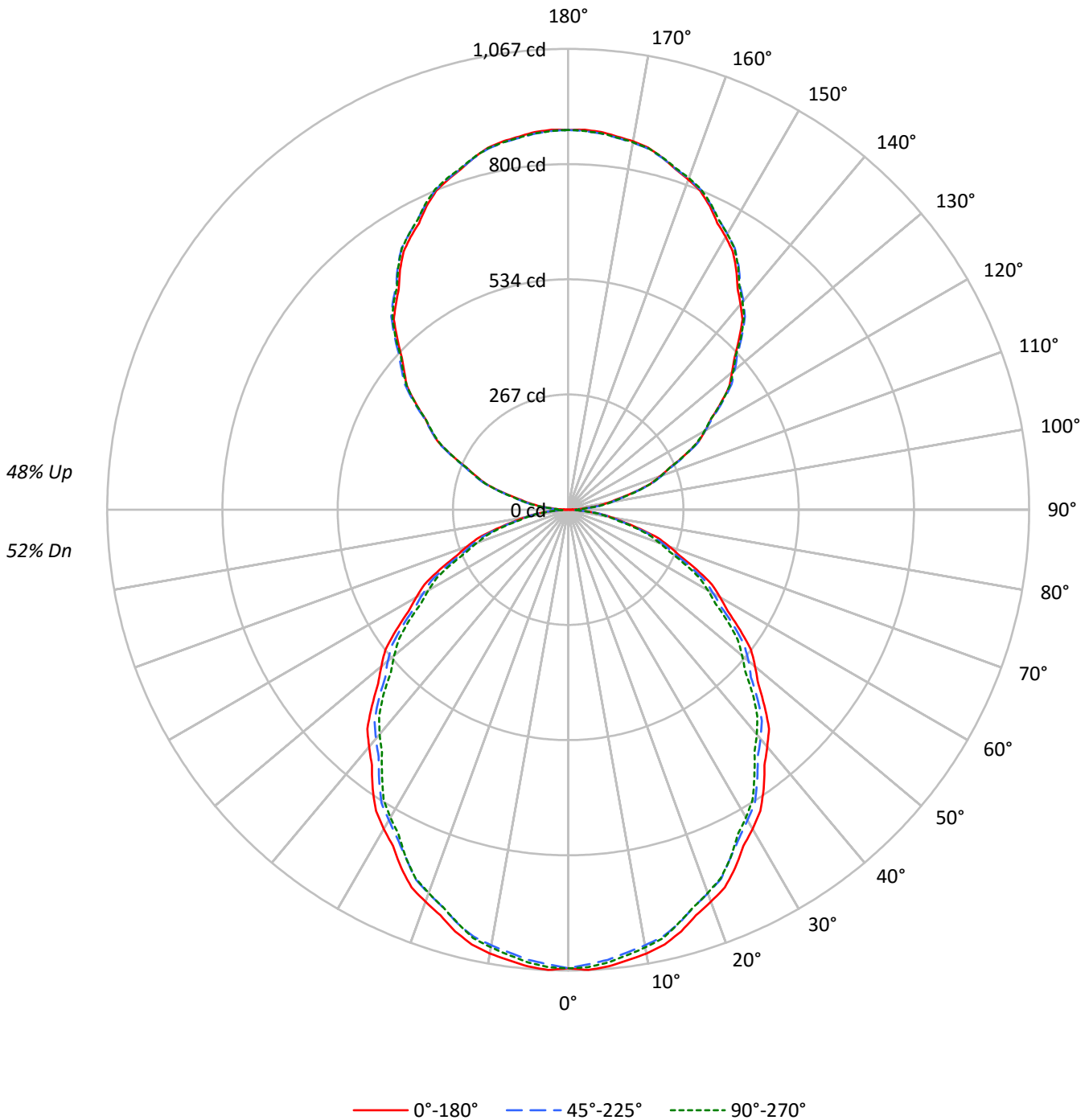
Input Watts (W): 45
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0		
RCR																										
0	108	108	108	108	100	100	100	100	85	85	85	71	71	71	58	58	58	52					52			
1	98	94	90	87	91	87	84	81	74	72	70	62	61	59	52	50	49	44					44			
2	90	82	76	71	83	76	71	66	65	61	58	55	52	49	45	43	41	37					37			
3	82	72	65	59	75	67	61	55	57	52	48	48	45	42	40	38	35	31					31			
4	75	64	56	50	69	59	52	47	51	46	41	43	39	36	36	33	30	27					27			
5	69	57	49	43	63	53	46	40	46	40	36	39	34	31	32	29	27	23					23			
6	63	51	43	37	58	48	40	35	41	35	31	35	31	27	29	26	23	20					20			
7	58	46	38	33	54	43	36	31	37	32	27	32	27	24	27	23	21	18					18			
8	54	42	34	29	50	39	32	27	34	28	24	29	25	21	25	21	19	16					16			
9	51	38	31	26	47	36	29	24	31	26	22	27	22	19	23	19	17	15					15			
10	47	35	28	23	44	33	26	22	29	23	20	25	21	17	21	18	15	13					13			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17142	17142	17142
5°	17208	16960	17058
10°	17105	16787	16870
15°	16893	16568	16552
20°	16593	16242	16225
25°	16295	15841	15841
30°	15910	15474	15340
35°	15554	15031	14808
40°	15104	14587	14309
45°	14661	14150	13798
50°	14179	13692	13205
55°	13678	13163	12673
60°	13120	12526	12064
65°	12520	11897	11351
70°	11759	11131	10603
75°	10699	10256	10000
80°	9493	9205	8731
85°	7762	7373	6614



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.8	1.9
10°-20°	280.9	5.4
20°-30°	412.9	8.0
30°-40°	479.6	9.3
40°-50°	479.1	9.3
50°-60°	417.8	8.1
60°-70°	308.9	6.0
70°-80°	175.0	3.4
80°-90°	50.6	1.0
90°-100°	55.7	1.1
100°-110°	173.1	3.4
110°-120°	295.8	5.7
120°-130°	389.0	7.5
130°-140°	436.6	8.5
140°-150°	428.1	8.3
150°-160°	359.1	7.0
160°-170°	238.2	4.6
170°-180°	83.2	1.6
0°-30°	793.6	15.4
0°-40°	1273.2	24.7
0°-60°	2170.1	42.0
0°-90°	2704.6	52.4
90°-120°	524.6	10.2
90°-150°	1778.3	34.4
90°-180°	2459.0	47.6
0°-180°	5163.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1062	1062	1062	1062	1062	
5°	1062	1057	1046	1054	1052	101
15°	1011	1004	991	995	990	284
25°	915	906	889	891	889	421
35°	789	779	763	756	751	492
45°	642	635	620	609	604	495
55°	486	479	468	456	450	434
65°	328	321	311	302	297	324
75°	172	169	164	159	160	183
85°	42	41	40	37	36	48
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°	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7
2.5°	1066.6	1065.7	1064.8	1063.9	1063.0	1061.5	1059.5	1057.5	1055.5	1053.5	1055.3
5°	1061.7	1060.8	1059.9	1059.0	1058.1	1056.4	1053.9	1051.4	1048.9	1046.4	1048.2
7.5°	1052.3	1050.9	1049.5	1048.1	1046.7	1044.7	1042.2	1039.6	1037.1	1034.5	1036.3
10°	1043.3	1041.7	1040.1	1038.5	1037.0	1034.8	1032.1	1029.4	1026.6	1023.9	1025.7
12.5°	1031.1	1029.7	1028.2	1026.8	1025.4	1023.4	1020.6	1017.9	1015.2	1012.5	1013.8
15°	1010.6	1009.3	1007.9	1006.6	1005.2	1003.0	1000.1	997.1	994.2	991.2	992.2
17.5°	984.5	983.1	981.8	980.4	979.1	976.9	973.9	970.9	967.9	964.9	966.0
20°	965.7	964.4	963.0	961.6	960.3	958.0	954.8	951.7	948.5	945.3	946.0
22.5°	946.9	945.0	943.1	941.2	939.3	936.9	933.9	930.9	927.9	924.9	925.0
25°	914.7	912.9	911.1	909.2	907.4	904.6	900.7	896.9	893.0	889.2	889.6
27.5°	877.9	876.3	874.7	873.0	871.4	869.1	866.0	863.0	859.9	856.9	856.2
30°	853.4	851.6	849.8	848.0	846.2	843.6	840.2	836.8	833.4	830.0	829.3
32.5°	827.3	825.8	824.4	822.9	821.5	819.0	815.4	811.8	808.2	804.6	803.4
35°	789.1	786.9	784.6	782.3	780.0	777.1	773.5	769.8	766.2	762.6	761.2
37.5°	746.0	744.0	742.0	740.0	738.1	735.2	731.6	728.0	724.4	720.7	719.0
40°	716.6	714.8	713.0	711.2	709.4	706.7	703.0	699.4	695.8	692.1	690.1
42.5°	688.1	686.2	684.4	682.6	680.8	678.1	674.4	670.8	667.2	663.6	661.3
45°	642.1	640.5	638.9	637.4	635.8	633.3	629.9	626.5	623.1	619.7	617.2
47.5°	596.4	594.9	593.4	591.9	590.4	587.9	584.3	580.8	577.3	573.7	571.1
50°	564.5	563.4	562.3	561.1	560.0	557.8	554.7	551.5	548.3	545.1	542.0
52.5°	533.5	532.0	530.5	529.0	527.5	525.3	522.3	519.3	516.3	513.3	510.7
55°	485.9	484.6	483.2	481.8	480.5	478.4	475.7	473.0	470.3	467.6	464.8
57.5°	438.1	437.1	436.0	434.9	433.8	431.8	428.8	425.8	422.8	419.8	417.1
60°	406.3	405.4	404.5	403.6	402.7	400.6	397.5	394.3	391.1	387.9	385.4
62.5°	375.3	373.8	372.4	370.9	369.5	367.5	365.1	362.6	360.2	357.7	355.4
65°	327.7	326.3	325.0	323.6	322.2	320.4	318.2	315.9	313.6	311.4	309.3
67.5°	279.3	278.2	277.1	276.0	274.9	273.4	271.3	269.3	267.3	265.2	263.6
70°	249.1	248.2	247.3	246.4	245.5	244.0	241.9	239.9	237.9	235.8	234.2
72.5°	218.1	217.1	216.2	215.3	214.4	213.3	212.0	210.7	209.4	208.0	206.5
75°	171.5	171.0	170.6	170.1	169.7	168.9	167.8	166.6	165.5	164.4	163.0
77.5°	129.9	129.1	128.3	127.5	126.8	126.2	125.7	125.2	124.8	124.3	123.7
80°	102.1	101.9	101.6	101.4	101.2	100.8	100.4	99.9	99.5	99.0	98.3
82.5°	76.0	75.9	75.9	75.8	75.8	75.6	75.3	75.1	74.8	74.5	73.7
85°	41.9	41.6	41.4	41.2	40.9	40.7	40.5	40.3	40.0	39.8	39.1
87.5°	14.8	14.9	14.9	14.9	15.0	15.2	15.5	15.9	16.3	16.6	16.0
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°	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7
2.5°	1057.1	1059.0	1060.8	1061.5	1061.1	1060.8	1060.4	1060.1
5°	1050.0	1051.8	1053.6	1054.3	1053.9	1053.4	1053.0	1052.5
7.5°	1038.2	1040.0	1041.8	1042.4	1041.9	1041.5	1041.0	1040.5
10°	1027.5	1029.4	1031.2	1031.7	1031.1	1030.4	1029.7	1029.0
12.5°	1015.0	1016.3	1017.6	1017.9	1017.4	1017.0	1016.5	1016.0
15°	993.1	994.0	994.9	994.8	993.6	992.5	991.4	990.2
17.5°	967.0	968.0	969.1	969.1	968.0	966.9	965.8	964.7
20°	946.7	947.4	948.0	947.9	947.0	946.1	945.2	944.3
22.5°	925.2	925.3	925.4	925.2	924.7	924.1	923.6	923.1
25°	890.1	890.5	891.0	891.0	890.5	890.1	889.6	889.2
27.5°	855.5	854.9	854.2	853.3	852.2	851.1	850.0	848.9
30°	828.6	827.9	827.2	826.4	825.5	824.6	823.7	822.8
32.5°	802.2	801.0	799.7	798.7	797.8	796.9	795.9	795.0
35°	759.9	758.5	757.1	755.9	754.8	753.6	752.5	751.3
37.5°	717.4	715.7	714.0	712.6	711.5	710.4	709.4	708.3
40°	688.1	686.0	684.0	682.5	681.6	680.7	679.8	678.9
42.5°	659.1	656.9	654.7	652.9	651.6	650.4	649.1	647.8
45°	614.7	612.2	609.7	608.0	607.1	606.2	605.3	604.3
47.5°	568.5	565.8	563.2	561.2	559.9	558.6	557.3	556.0
50°	538.8	535.6	532.4	530.3	529.1	528.0	526.9	525.7
52.5°	508.0	505.4	502.8	500.7	499.2	497.7	496.2	494.7
55°	462.1	459.4	456.7	454.7	453.6	452.5	451.3	450.2
57.5°	414.4	411.7	409.1	407.3	406.4	405.6	404.7	403.8
60°	382.9	380.4	377.9	376.4	375.7	375.0	374.3	373.6
62.5°	353.1	350.8	348.5	346.9	346.0	345.1	344.3	343.4
65°	307.3	305.2	303.2	301.6	300.5	299.3	298.2	297.1
67.5°	262.0	260.5	258.9	257.6	256.7	255.8	254.9	254.0
70°	232.6	231.1	229.5	228.2	227.3	226.4	225.5	224.6
72.5°	204.9	203.3	201.7	200.5	199.8	199.1	198.4	197.6
75°	161.6	160.3	158.9	158.5	158.9	159.4	159.8	160.3
77.5°	123.0	122.3	121.6	121.0	120.3	119.7	119.1	118.4
80°	97.7	97.0	96.3	95.7	95.3	94.8	94.4	93.9
82.5°	72.8	71.9	71.1	70.6	70.5	70.4	70.3	70.2
85°	38.5	37.8	37.1	36.6	36.4	36.2	36.0	35.7
87.5°	15.4	14.8	14.2	13.8	13.7	13.5	13.4	13.2
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



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CATALOG NUMBER: S122DIW-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)