

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: P331536-935

Luminaire Tested: **S122DIW-S675D710U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331536-935  
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-S675D710U935-4F0-1E-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**

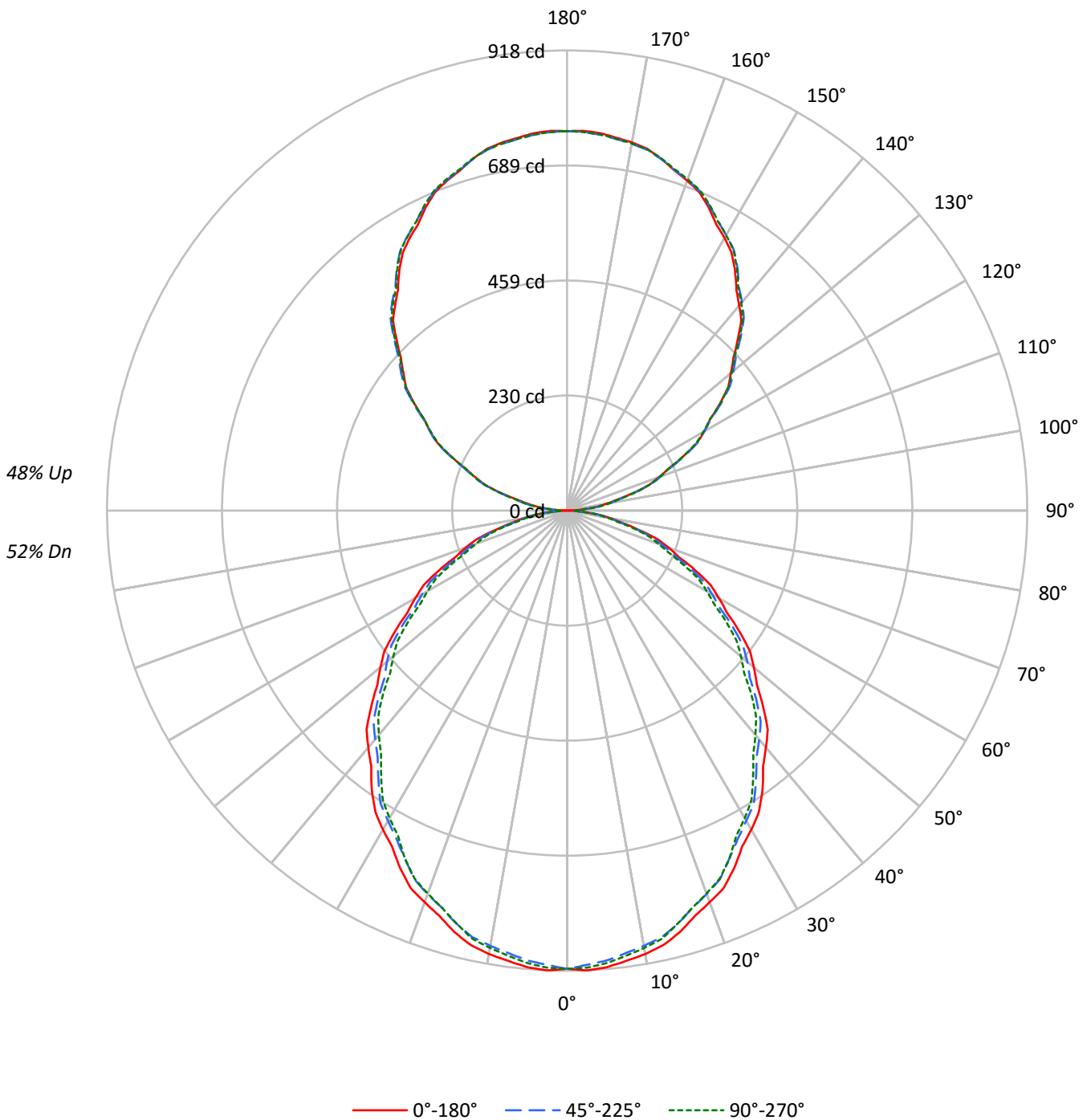
Lumens per Lamp: N/A  
Luminaire Lumens: 4445.6 lumens  
Efficiency: N/A  
Efficacy: 98.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 45  
Input Voltage (V): 120  
Input Current (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	0	
RCR																						
0	108	108	108	108	100	100	100	100	85	85	85	71	71	71	58	58	58	52				
1	98	94	90	87	91	87	84	81	74	72	70	62	61	59	52	50	49	44				
2	90	82	76	71	83	76	71	66	65	61	58	55	52	49	45	43	41	37				
3	82	72	65	59	75	67	61	55	57	52	48	48	45	42	40	38	35	31				
4	75	64	56	50	69	59	52	47	51	46	41	43	39	36	36	33	30	27				
5	69	57	49	43	63	53	46	40	46	40	36	39	34	31	32	29	27	23				
6	63	51	43	37	58	48	40	35	41	35	31	35	31	27	29	26	23	20				
7	58	46	38	33	54	43	36	31	37	32	27	32	27	24	27	23	21	18				
8	54	42	34	29	50	39	32	27	34	28	24	29	25	21	25	21	19	16				
9	51	38	31	26	47	36	29	24	31	26	22	27	22	19	23	19	17	15				
10	47	35	28	23	44	33	26	22	29	23	20	25	21	17	21	18	15	13				

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

	0°	45°	90°
0°	14759	14759	14759
5°	14815	14603	14687
10°	14728	14454	14526
15°	14544	14265	14252
20°	14287	13984	13969
25°	14031	13639	13639
30°	13699	13323	13207
35°	13391	12942	12751
40°	13004	12560	12319
45°	12622	12184	11880
50°	12208	11788	11369
55°	11778	11333	10911
60°	11296	10785	10388
65°	10777	10243	9773
70°	10126	9583	9130
75°	9214	8827	8609
80°	8173	7922	7513
85°	6688	6354	5687



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.0	1.9
10°-20°	241.9	5.4
20°-30°	355.5	8.0
30°-40°	412.9	9.3
40°-50°	412.5	9.3
50°-60°	359.7	8.1
60°-70°	266.0	6.0
70°-80°	150.6	3.4
80°-90°	43.5	1.0
90°-100°	48.0	1.1
100°-110°	149.0	3.4
110°-120°	254.7	5.7
120°-130°	334.9	7.5
130°-140°	375.9	8.5
140°-150°	368.6	8.3
150°-160°	309.2	7.0
160°-170°	205.1	4.6
170°-180°	71.7	1.6
0°-30°	683.3	15.4
0°-40°	1096.3	24.7
0°-60°	1868.5	42.0
0°-90°	2328.6	52.4
90°-120°	451.7	10.2
90°-150°	1531.1	34.4
90°-180°	2117.0	47.6
0°-180°	4445.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	914	914	914	914	914	
5°	914	910	901	907	906	87
15°	870	865	853	857	853	245
25°	788	780	766	767	766	362
35°	679	670	657	651	647	424
45°	553	546	534	524	520	426
55°	418	413	403	392	388	374
65°	282	277	268	260	256	279
75°	148	146	142	137	138	158
85°	36	35	34	32	31	41
90°	1	9	22	21	22	3
95°	33	39	41	41	40	38
105°	137	139	141	142	142	145
115°	256	259	258	257	256	253
125°	372	377	376	374	373	332
135°	481	488	489	489	487	372
145°	584	588	592	593	590	365
155°	668	670	672	674	673	307
165°	726	726	726	730	727	205
175°	756	754	753	757	753	72
180°	757	757	757	757	757	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1
2.5°	918.3	917.6	916.8	916.0	915.2	914.0	912.2	910.5	908.8	907.1	908.6
5°	914.1	913.3	912.6	911.8	911.0	909.6	907.4	905.3	903.1	901.0	902.5
7.5°	906.0	904.8	903.6	902.4	901.2	899.5	897.3	895.1	892.9	890.7	892.3
10°	898.3	896.9	895.5	894.1	892.9	891.0	888.6	886.3	883.9	881.6	883.1
12.5°	887.8	886.6	885.3	884.1	882.9	881.1	878.7	876.4	874.1	871.8	872.9
15°	870.1	869.0	867.8	866.7	865.5	863.6	861.1	858.5	856.0	853.4	854.3
17.5°	847.7	846.4	845.3	844.1	843.0	841.1	838.5	835.9	833.4	830.8	831.7
20°	831.5	830.3	829.1	827.9	826.8	824.8	822.1	819.4	816.7	813.9	814.5
22.5°	815.3	813.6	812.0	810.4	808.7	806.7	804.1	801.5	798.9	796.3	796.4
25°	787.6	786.0	784.5	782.8	781.3	778.9	775.5	772.2	768.9	765.6	765.9
27.5°	755.9	754.5	753.1	751.7	750.3	748.3	745.6	743.0	740.4	737.8	737.2
30°	734.8	733.2	731.7	730.1	728.6	726.3	723.4	720.5	717.6	714.6	714.0
32.5°	712.3	711.0	709.8	708.5	707.3	705.2	702.1	699.0	695.9	692.8	691.7
35°	679.4	677.5	675.5	673.6	671.6	669.1	666.0	662.8	659.7	656.6	655.4
37.5°	642.3	640.6	638.9	637.1	635.5	633.0	629.9	626.8	623.7	620.5	619.1
40°	617.0	615.4	613.9	612.3	610.8	608.5	605.3	602.2	599.1	595.9	594.2
42.5°	592.5	590.8	589.3	587.7	586.2	583.8	580.7	577.6	574.5	571.4	569.4
45°	552.8	551.5	550.1	548.8	547.4	545.3	542.3	539.4	536.5	533.6	531.4
47.5°	513.5	512.2	510.9	509.6	508.3	506.2	503.1	500.1	497.1	494.0	491.7
50°	486.0	485.1	484.1	483.1	482.2	480.3	477.6	474.8	472.1	469.3	466.7
52.5°	459.3	458.1	456.8	455.5	454.2	452.3	449.7	447.1	444.5	442.0	439.7
55°	418.4	417.2	416.0	414.8	413.7	411.9	409.6	407.3	404.9	402.6	400.2
57.5°	377.2	376.3	375.4	374.4	373.5	371.8	369.2	366.6	364.0	361.4	359.1
60°	349.8	349.0	348.3	347.5	346.7	344.9	342.2	339.5	336.7	334.0	331.8
62.5°	323.1	321.8	320.6	319.3	318.1	316.4	314.4	312.2	310.1	308.0	306.0
65°	282.1	280.9	279.8	278.6	277.4	275.9	274.0	272.0	270.0	268.1	266.3
67.5°	240.5	239.5	238.6	237.6	236.7	235.4	233.6	231.9	230.1	228.3	227.0
70°	214.5	213.7	212.9	212.2	211.4	210.1	208.3	206.6	204.8	203.0	201.6
72.5°	187.8	186.9	186.1	185.4	184.6	183.7	182.5	181.4	180.3	179.1	177.8
75°	147.7	147.2	146.9	146.5	146.1	145.4	144.5	143.4	142.5	141.5	140.3
77.5°	111.8	111.2	110.5	109.8	109.2	108.7	108.2	107.8	107.5	107.0	106.5
80°	87.9	87.7	87.5	87.3	87.1	86.8	86.4	86.0	85.7	85.2	84.6
82.5°	65.4	65.3	65.3	65.3	65.3	65.1	64.8	64.7	64.4	64.1	63.5
85°	36.1	35.8	35.6	35.5	35.2	35.0	34.9	34.7	34.4	34.3	33.7
87.5°	12.7	12.8	12.8	12.8	12.9	13.1	13.3	13.7	14.0	14.3	13.8
90°	0.6	2.3	4.0	5.8	7.5	9.9	13.0	16.1	19.2	22.4	22.0
92.5°	11.4	12.7	13.9	15.2	16.4	17.4	18.1	18.9	19.5	20.3	20.4
95°	33.2	34.6	36.1	37.5	38.9	39.8	40.0	40.3	40.6	40.9	40.9
97.5°	60.7	61.9	63.2	64.4	65.7	66.6	67.2	67.7	68.2	68.7	68.7
100°	81.1	82.3	83.4	84.6	85.7	86.4	86.9	87.3	87.7	88.2	88.2
102.5°	102.6	103.5	104.4	105.3	106.2	106.9	107.5	108.1	108.6	109.1	109.3
105°	137.3	137.8	138.2	138.6	139.1	139.4	139.7	140.0	140.3	140.6	140.9
107.5°	172.4	173.0	173.7	174.3	174.9	175.2	175.2	175.2	175.2	175.2	175.3
110°	194.8	195.7	196.6	197.4	198.3	198.7	198.7	198.7	198.7	198.7	198.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	219.4	220.2	221.1	222.0	222.8	223.2	223.1	222.9	222.8	222.7	222.4
115°	255.5	256.4	257.3	258.1	259.0	259.2	259.0	258.6	258.4	258.1	258.0
117.5°	291.6	292.7	293.9	295.0	296.1	296.3	295.5	294.7	293.9	293.2	292.8
120°	315.6	316.8	317.9	319.0	320.1	320.1	319.0	317.9	316.8	315.6	315.6
122.5°	337.6	339.0	340.4	341.6	343.0	343.4	342.5	341.7	341.0	340.2	339.8
125°	371.9	373.2	374.4	375.7	376.9	377.4	376.9	376.5	376.1	375.7	375.2
127.5°	405.2	406.8	408.5	410.0	411.6	412.2	411.7	411.2	410.7	410.2	409.7
130°	426.1	428.0	429.8	431.7	433.5	434.3	434.0	433.8	433.4	433.2	432.9
132.5°	449.7	451.2	452.7	454.2	455.6	456.5	456.5	456.6	456.7	456.7	456.1
135°	481.1	482.7	484.2	485.8	487.3	488.3	488.5	488.9	489.1	489.4	489.2
137.5°	514.2	515.5	516.8	518.1	519.3	520.1	520.5	520.9	521.2	521.6	521.5
140°	534.2	535.4	536.7	538.0	539.2	540.2	541.0	541.7	542.3	543.0	543.0
142.5°	554.6	555.9	557.2	558.4	559.6	560.6	561.0	561.5	562.0	562.5	562.6
145°	583.9	585.0	585.9	586.9	588.0	588.8	589.7	590.6	591.4	592.3	592.4
147.5°	610.2	611.3	612.5	613.7	614.9	615.8	616.4	616.9	617.5	618.1	618.4
150°	628.0	628.9	629.7	630.6	631.5	632.1	632.7	633.3	633.9	634.5	634.9
152.5°	643.9	644.7	645.6	646.4	647.3	648.1	648.8	649.5	650.1	650.8	651.3
155°	667.6	668.0	668.5	668.9	669.3	669.8	670.2	670.6	671.1	671.5	672.2
157.5°	687.9	688.3	688.5	688.8	689.1	689.4	689.7	689.9	690.2	690.4	691.4
160°	700.3	700.5	700.8	701.1	701.4	701.6	701.7	701.9	702.0	702.1	703.0
162.5°	711.4	711.5	711.6	711.6	711.7	711.8	712.0	712.1	712.2	712.4	713.3
165°	726.4	726.3	726.2	726.0	725.9	725.8	725.8	725.8	725.8	725.8	726.8
167.5°	739.0	738.6	738.1	737.7	737.3	737.0	737.0	736.9	736.9	736.9	737.9
170°	745.6	745.2	744.8	744.3	743.9	743.6	743.5	743.3	743.2	743.0	744.1
172.5°	750.2	749.8	749.3	748.9	748.5	748.2	748.0	748.0	747.8	747.6	748.6
175°	755.8	755.4	755.0	754.6	754.1	753.8	753.5	753.2	752.9	752.6	753.6
177.5°	758.1	757.8	757.4	757.1	756.7	756.5	756.2	756.0	755.8	755.5	756.2
180°	757.1	757.1	757.1	757.1	757.1	757.1	757.1	757.1	757.1	757.1	757.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1
2.5°	910.2	911.8	913.3	914.0	913.6	913.3	913.0	912.7
5°	904.0	905.6	907.1	907.8	907.4	907.0	906.6	906.2
7.5°	893.9	895.4	897.0	897.5	897.1	896.7	896.3	895.9
10°	884.7	886.3	887.9	888.3	887.8	887.2	886.6	886.0
12.5°	873.9	875.0	876.2	876.4	876.0	875.6	875.2	874.8
15°	855.1	855.8	856.6	856.5	855.5	854.5	853.6	852.6
17.5°	832.6	833.4	834.4	834.4	833.4	832.5	831.6	830.6
20°	815.1	815.7	816.2	816.1	815.4	814.6	813.8	813.0
22.5°	796.6	796.7	796.8	796.6	796.2	795.7	795.2	794.8
25°	766.4	766.7	767.2	767.2	766.7	766.4	765.9	765.6
27.5°	736.6	736.1	735.5	734.7	733.7	732.8	731.8	730.9
30°	713.4	712.8	712.2	711.5	710.8	710.0	709.2	708.4
32.5°	690.7	689.7	688.5	687.7	686.9	686.1	685.3	684.5
35°	654.3	653.1	651.9	650.8	649.9	648.8	647.9	646.9
37.5°	617.7	616.2	614.8	613.5	612.6	611.7	610.8	609.8
40°	592.5	590.6	588.9	587.6	586.9	586.1	585.3	584.5
42.5°	567.5	565.6	563.7	562.1	561.0	560.0	558.9	557.8
45°	529.3	527.1	525.0	523.5	522.7	521.9	521.2	520.3
47.5°	489.5	487.2	484.9	483.2	482.1	481.0	479.8	478.7
50°	463.9	461.2	458.4	456.6	455.6	454.6	453.7	452.6
52.5°	437.4	435.1	432.9	431.1	429.8	428.5	427.2	425.9
55°	397.9	395.5	393.2	391.5	390.5	389.6	388.6	387.6
57.5°	356.8	354.5	352.2	350.7	349.9	349.2	348.4	347.7
60°	329.7	327.5	325.4	324.1	323.5	322.9	322.3	321.7
62.5°	304.0	302.0	300.1	298.7	297.9	297.1	296.4	295.7
65°	264.6	262.8	261.1	259.7	258.7	257.7	256.8	255.8
67.5°	225.6	224.3	222.9	221.8	221.0	220.2	219.5	218.7
70°	200.3	199.0	197.6	196.5	195.7	194.9	194.2	193.4
72.5°	176.4	175.0	173.7	172.6	172.0	171.4	170.8	170.1
75°	139.1	138.0	136.8	136.5	136.8	137.2	137.6	138.0
77.5°	105.9	105.3	104.7	104.2	103.6	103.1	102.5	101.9
80°	84.1	83.5	82.9	82.4	82.1	81.6	81.3	80.8
82.5°	62.7	61.9	61.2	60.8	60.7	60.6	60.5	60.4
85°	33.1	32.5	31.9	31.5	31.3	31.2	31.0	30.7
87.5°	13.3	12.7	12.2	11.9	11.8	11.6	11.5	11.4
90°	21.8	21.5	21.3	21.2	21.3	21.4	21.6	21.7
92.5°	20.4	20.5	20.6	20.6	20.6	20.7	20.7	20.7
95°	40.9	40.9	40.9	40.7	40.5	40.2	39.9	39.6
97.5°	68.7	68.7	68.7	68.7	68.7	68.7	68.6	68.6
100°	88.2	88.2	88.2	88.1	88.0	87.8	87.6	87.6
102.5°	109.3	109.4	109.6	109.6	109.4	109.3	109.2	109.0
105°	141.1	141.4	141.7	141.8	141.8	141.8	141.8	141.8
107.5°	175.4	175.6	175.6	175.4	174.7	174.1	173.4	172.8
110°	198.7	198.7	198.7	198.5	198.0	197.6	197.2	196.8





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	222.1	221.7	221.4	221.0	220.8	220.4	220.1	219.8
115°	257.9	257.7	257.5	257.3	256.8	256.4	256.0	255.5
117.5°	292.5	292.1	291.8	291.4	290.9	290.5	290.1	289.6
120°	315.6	315.6	315.6	315.4	315.0	314.5	314.1	313.7
122.5°	339.5	339.1	338.8	338.5	338.1	337.9	337.5	337.3
125°	374.8	374.4	373.9	373.7	373.6	373.4	373.2	373.2
127.5°	409.1	408.6	408.1	407.7	407.2	406.7	406.3	405.9
130°	432.7	432.3	432.0	431.6	431.0	430.5	429.9	429.4
132.5°	455.5	454.8	454.2	453.7	453.2	452.7	452.3	451.9
135°	489.1	489.0	488.9	488.5	488.1	487.7	487.2	486.8
137.5°	521.3	521.2	521.2	520.8	520.2	519.7	519.1	518.5
140°	543.0	543.0	543.0	542.8	542.3	541.7	541.1	540.5
142.5°	562.7	562.8	562.9	562.7	562.1	561.5	561.0	560.4
145°	592.5	592.7	592.8	592.6	592.0	591.5	590.9	590.4
147.5°	618.7	619.0	619.3	619.2	618.7	618.1	617.6	617.1
150°	635.2	635.7	636.1	636.1	635.7	635.2	634.9	634.5
152.5°	651.9	652.4	653.0	653.0	652.4	651.9	651.3	650.8
155°	672.9	673.6	674.3	674.5	674.1	673.6	673.2	672.8
157.5°	692.3	693.3	694.2	694.4	693.7	693.0	692.3	691.6
160°	703.9	704.7	705.6	705.7	705.2	704.6	704.0	703.4
162.5°	714.3	715.3	716.3	716.4	715.7	715.1	714.4	713.7
165°	727.8	728.8	729.8	730.0	729.2	728.5	727.8	727.1
167.5°	738.9	739.9	740.9	741.0	740.3	739.5	738.8	738.0
170°	745.0	746.1	747.0	747.1	746.2	745.4	744.5	743.6
172.5°	749.7	750.6	751.7	751.7	750.9	750.0	749.2	748.3
175°	754.6	755.6	756.6	756.6	755.8	755.0	754.1	753.3
177.5°	756.9	757.6	758.3	758.3	757.6	756.9	756.2	755.5
180°	757.1	757.1	757.1	757.1	757.1	757.1	757.1	757.1

(END OF REPORT)