

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: P331354-927

Luminaire Tested: **SA2XXDIP-C675D725U927-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331354-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C675D725U927-4F0-1E-UDD-F  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 725 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

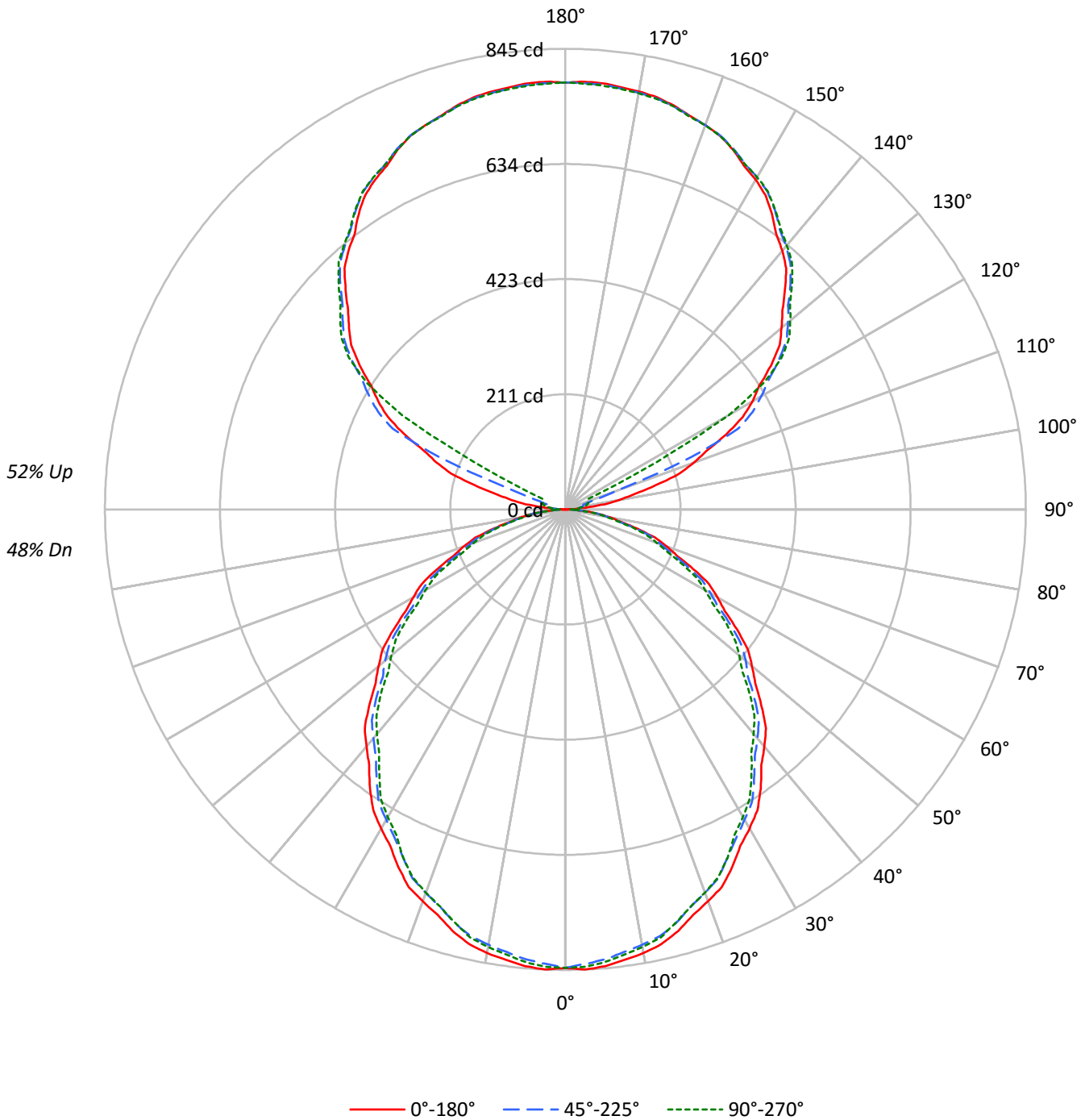
Lumens per Lamp: N/A  
Luminaire Lumens: 4436.7 lumens  
Efficiency: N/A  
Efficacy: 96.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse

Input Watts (W): 45.9  
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	107	107	107	107	98	98	98	98	82	82	82	68	68	68	55	55	55	48				48
1	97	93	89	86	89	86	82	79	72	70	68	60	58	56	48	47	46				41	
2	89	81	75	70	81	75	70	65	63	59	56	52	50	47	42	40	39				34	
3	81	71	64	58	74	66	60	54	56	51	47	46	43	40	38	35	33				29	
4	74	63	55	49	68	58	52	46	50	44	40	41	37	34	34	31	28				25	
5	68	56	48	42	62	52	45	40	44	39	35	37	33	30	30	27	25				22	
6	63	51	42	37	57	47	40	34	40	34	30	34	29	26	27	24	22				19	
7	58	46	38	32	53	42	35	30	36	31	27	30	26	23	25	22	19				17	
8	54	41	34	28	49	38	32	27	33	28	24	28	24	20	23	20	17				15	
9	50	38	30	25	46	35	28	24	30	25	21	26	21	18	21	18	16				14	
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	14				12	

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

	0°	45°	90°
0°	13580	13580	13580
5°	13632	13434	13514
10°	13550	13298	13365
15°	13382	13125	13112
20°	13144	12866	12854
25°	12909	12549	12549
30°	12603	12258	12152
35°	12321	11907	11732
40°	11965	11556	11335
45°	11615	11209	10930
50°	11233	10846	10462
55°	10835	10427	10038
60°	10395	9923	9558
65°	9918	9425	8993
70°	9314	8818	8398
75°	8478	8122	7923
80°	7522	7290	6918
85°	6150	5835	5243



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.1	1.8
10°-20°	222.5	5.0
20°-30°	327.1	7.4
30°-40°	379.9	8.6
40°-50°	379.5	8.6
50°-60°	331.0	7.5
60°-70°	244.7	5.5
70°-80°	138.6	3.1
80°-90°	39.2	0.9
90°-100°	26.1	0.6
100°-110°	95.8	2.2
110°-120°	256.1	5.8
120°-130°	422.7	9.5
130°-140°	449.6	10.1
140°-150°	417.8	9.4
150°-160°	335.9	7.6
160°-170°	216.5	4.9
170°-180°	74.5	1.7
0°-30°	628.7	14.2
0°-40°	1008.6	22.7
0°-60°	1719.1	38.7
0°-90°	2141.7	48.3
90°-120°	378.0	8.5
90°-150°	1668.1	37.6
90°-180°	2295.0	51.7
0°-180°	4436.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	841	841	841	841	841	
5°	841	838	829	835	834	80
15°	801	795	785	788	784	225
25°	725	718	704	706	704	333
35°	625	617	604	599	595	390
45°	509	503	491	482	479	392
55°	385	380	370	361	357	344
65°	260	254	247	240	235	257
75°	136	134	130	126	127	145
85°	33	32	32	29	28	38
90°	1	7	11	14	15	3
95°	37	19	22	25	24	45
105°	172	180	34	41	43	184
115°	326	336	350	100	46	321
125°	461	468	479	483	484	411
135°	570	579	584	590	589	440
145°	661	661	670	674	672	413
155°	728	724	730	733	729	335
165°	767	764	766	769	766	217
175°	785	781	782	785	780	75
180°	783	783	783	783	783	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1
2.5°	844.9	844.2	843.5	842.8	842.1	840.9	839.3	837.7	836.1	834.6	836.0
5°	841.1	840.3	839.6	838.9	838.2	836.9	834.9	832.9	830.9	828.9	830.4
7.5°	833.6	832.5	831.4	830.3	829.2	827.6	825.6	823.6	821.6	819.5	820.9
10°	826.5	825.2	823.9	822.7	821.5	819.8	817.6	815.5	813.3	811.1	812.5
12.5°	816.8	815.7	814.5	813.4	812.3	810.7	808.5	806.4	804.2	802.1	803.1
15°	800.6	799.5	798.4	797.4	796.3	794.6	792.3	789.9	787.6	785.2	786.0
17.5°	779.9	778.8	777.8	776.7	775.6	773.9	771.5	769.1	766.8	764.4	765.2
20°	765.0	764.0	762.9	761.8	760.7	758.9	756.4	753.9	751.4	748.8	749.4
22.5°	750.1	748.6	747.1	745.6	744.1	742.2	739.8	737.4	735.1	732.7	732.8
25°	724.6	723.2	721.8	720.3	718.8	716.6	713.5	710.5	707.4	704.4	704.7
27.5°	695.5	694.2	692.9	691.6	690.3	688.5	686.0	683.7	681.2	678.8	678.3
30°	676.0	674.6	673.2	671.8	670.3	668.3	665.6	662.9	660.2	657.5	657.0
32.5°	655.4	654.2	653.1	651.9	650.8	648.8	645.9	643.1	640.2	637.4	636.4
35°	625.1	623.4	621.5	619.7	617.9	615.6	612.8	609.8	607.0	604.1	603.0
37.5°	591.0	589.4	587.8	586.2	584.7	582.4	579.6	576.7	573.9	570.9	569.6
40°	567.7	566.3	564.8	563.4	562.0	559.8	556.9	554.1	551.2	548.3	546.7
42.5°	545.1	543.6	542.2	540.7	539.3	537.2	534.2	531.4	528.5	525.7	523.9
45°	508.7	507.4	506.1	504.9	503.7	501.7	499.0	496.3	493.6	490.9	488.9
47.5°	472.5	471.3	470.1	468.9	467.7	465.7	462.9	460.1	457.3	454.5	452.4
50°	447.2	446.3	445.4	444.5	443.6	441.9	439.4	436.9	434.4	431.8	429.4
52.5°	422.6	421.4	420.3	419.1	417.9	416.1	413.8	411.4	409.0	406.6	404.6
55°	384.9	383.9	382.8	381.7	380.6	379.0	376.8	374.7	372.6	370.4	368.2
57.5°	347.1	346.3	345.4	344.5	343.6	342.1	339.7	337.3	334.9	332.6	330.4
60°	321.9	321.2	320.4	319.7	319.0	317.3	314.9	312.4	309.8	307.3	305.3
62.5°	297.3	296.1	295.0	293.8	292.7	291.1	289.2	287.2	285.3	283.4	281.5
65°	259.6	258.5	257.5	256.4	255.2	253.8	252.1	250.3	248.4	246.7	245.0
67.5°	221.3	220.4	219.5	218.6	217.8	216.6	214.9	213.3	211.8	210.1	208.8
70°	197.3	196.6	195.9	195.2	194.5	193.3	191.6	190.0	188.5	186.8	185.5
72.5°	172.8	172.0	171.3	170.6	169.8	169.0	167.9	166.9	165.9	164.8	163.6
75°	135.9	135.5	135.1	134.8	134.4	133.8	132.9	132.0	131.1	130.2	129.1
77.5°	102.9	102.3	101.6	101.0	100.4	100.0	99.6	99.2	98.9	98.5	98.0
80°	80.9	80.7	80.5	80.3	80.2	79.9	79.5	79.1	78.8	78.4	77.9
82.5°	60.2	60.1	60.1	60.0	60.0	59.9	59.7	59.5	59.3	59.0	58.4
85°	33.2	33.0	32.8	32.6	32.4	32.2	32.1	31.9	31.7	31.5	31.0
87.5°	11.7	11.7	11.7	11.7	11.7	11.6	11.6	11.5	11.4	11.3	11.0
90°	0.6	2.0	3.3	4.8	6.1	7.3	8.3	9.3	10.3	11.3	12.0
92.5°	11.4	11.3	11.2	11.1	10.9	11.2	11.6	12.1	12.7	13.2	13.5
95°	36.8	32.7	28.5	24.4	20.2	18.5	19.5	20.4	21.2	22.1	22.7
97.5°	73.1	61.4	49.7	37.9	26.2	21.4	23.4	25.5	27.6	29.5	30.1
100°	100.3	83.0	65.8	48.6	31.3	23.8	25.9	28.0	30.2	32.3	33.3
102.5°	130.2	126.6	122.9	119.3	115.6	104.8	86.9	69.0	51.1	33.2	34.5
105°	172.3	176.0	179.8	183.6	187.4	172.1	137.7	103.3	68.9	34.5	36.0
107.5°	220.2	223.2	226.3	229.3	232.4	213.3	172.1	130.9	89.6	48.4	47.0
110°	251.0	253.7	256.4	259.0	261.6	244.7	208.3	172.0	135.5	99.2	86.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	280.0	282.4	284.7	287.1	289.4	286.1	277.1	268.1	259.1	250.1	204.2
115°	325.8	328.0	330.1	332.2	334.4	337.1	340.2	343.3	346.5	349.7	291.4
117.5°	366.8	369.2	371.5	373.9	376.3	378.6	380.8	382.9	385.1	387.3	373.2
120°	396.6	398.5	400.4	402.3	404.3	406.3	408.6	410.8	413.1	415.3	416.8
122.5°	422.1	424.1	426.0	428.0	430.0	432.2	434.7	437.2	439.7	442.1	443.0
125°	460.7	462.3	464.0	465.6	467.2	469.3	471.7	474.0	476.4	478.9	479.7
127.5°	495.7	497.6	499.4	501.1	503.0	504.8	506.6	508.3	510.2	511.9	513.3
130°	517.9	520.0	522.0	523.9	526.0	527.7	529.1	530.4	531.9	533.2	534.6
132.5°	540.6	542.3	544.1	545.7	547.5	549.0	550.4	551.8	553.2	554.5	555.7
135°	570.1	572.1	574.1	576.2	578.1	579.7	580.8	581.9	583.1	584.2	585.5
137.5°	599.9	601.3	602.7	604.1	605.5	606.9	608.2	609.4	610.7	612.0	613.2
140°	619.4	620.4	621.4	622.4	623.4	624.6	626.0	627.4	628.8	630.2	631.3
142.5°	635.7	636.6	637.5	638.4	639.3	640.6	642.1	643.7	645.3	646.9	647.9
145°	661.3	661.2	661.1	660.9	660.8	661.8	663.9	666.1	668.2	670.3	671.3
147.5°	683.7	683.2	682.7	682.2	681.8	682.5	684.7	686.7	688.9	691.0	691.7
150°	698.2	697.3	696.4	695.5	694.6	695.2	697.2	699.2	701.2	703.2	704.0
152.5°	710.3	709.4	708.4	707.4	706.5	706.9	708.8	710.7	712.6	714.5	715.3
155°	728.2	727.1	725.9	724.8	723.7	723.8	725.3	726.8	728.3	729.8	730.6
157.5°	742.1	741.2	740.2	739.3	738.3	738.3	739.4	740.5	741.5	742.6	743.5
160°	750.3	749.5	748.8	748.0	747.3	747.3	748.0	748.8	749.5	750.3	751.1
162.5°	757.6	756.8	756.1	755.3	754.5	754.5	755.1	755.7	756.5	757.1	758.0
165°	767.3	766.5	765.8	765.0	764.2	764.1	764.5	764.9	765.2	765.6	766.4
167.5°	774.5	773.8	773.0	772.3	771.5	771.3	771.7	772.0	772.4	772.7	773.6
170°	778.6	777.8	777.1	776.3	775.6	775.3	775.6	775.9	776.1	776.3	777.2
172.5°	781.3	780.5	779.8	779.0	778.3	778.1	778.3	778.6	778.8	779.0	780.0
175°	784.8	783.9	783.1	782.2	781.3	781.0	781.3	781.5	781.7	782.0	782.9
177.5°	785.4	784.7	784.0	783.3	782.6	782.3	782.4	782.5	782.6	782.7	783.4
180°	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1
2.5°	837.4	838.9	840.3	840.9	840.6	840.3	840.0	839.8
5°	831.8	833.2	834.6	835.2	834.9	834.5	834.2	833.8
7.5°	822.4	823.9	825.3	825.8	825.4	825.1	824.7	824.3
10°	814.0	815.5	816.9	817.3	816.8	816.3	815.7	815.2
12.5°	804.1	805.1	806.1	806.4	806.0	805.6	805.3	804.9
15°	786.7	787.4	788.1	788.1	787.1	786.2	785.4	784.4
17.5°	766.0	766.8	767.7	767.7	766.8	766.0	765.1	764.2
20°	750.0	750.5	751.0	750.9	750.2	749.5	748.8	748.1
22.5°	732.9	733.0	733.1	732.9	732.5	732.1	731.7	731.3
25°	705.1	705.4	705.8	705.8	705.4	705.1	704.7	704.4
27.5°	677.7	677.2	676.7	676.0	675.1	674.2	673.4	672.5
30°	656.4	655.8	655.3	654.7	653.9	653.2	652.5	651.8
32.5°	635.5	634.5	633.5	632.7	632.0	631.3	630.5	629.8
35°	602.0	600.9	599.8	598.8	597.9	597.0	596.1	595.2
37.5°	568.3	567.0	565.6	564.5	563.6	562.8	562.0	561.1
40°	545.1	543.4	541.9	540.7	540.0	539.2	538.5	537.8
42.5°	522.1	520.4	518.6	517.2	516.2	515.2	514.2	513.2
45°	487.0	485.0	483.0	481.6	480.9	480.2	479.5	478.7
47.5°	450.4	448.2	446.2	444.6	443.5	442.5	441.5	440.5
50°	426.8	424.3	421.8	420.1	419.1	418.3	417.4	416.5
52.5°	402.4	400.4	398.3	396.6	395.5	394.3	393.1	391.9
55°	366.1	363.9	361.8	360.2	359.3	358.5	357.5	356.6
57.5°	328.3	326.1	324.1	322.7	321.9	321.3	320.6	319.9
60°	303.3	301.3	299.4	298.2	297.6	297.1	296.5	296.0
62.5°	279.7	277.9	276.1	274.8	274.1	273.4	272.7	272.0
65°	243.4	241.8	240.2	238.9	238.1	237.1	236.2	235.4
67.5°	207.6	206.4	205.1	204.1	203.4	202.6	201.9	201.2
70°	184.3	183.1	181.8	180.8	180.1	179.4	178.6	177.9
72.5°	162.3	161.1	159.8	158.8	158.3	157.7	157.2	156.5
75°	128.0	127.0	125.9	125.6	125.9	126.3	126.6	127.0
77.5°	97.4	96.9	96.3	95.9	95.3	94.8	94.3	93.8
80°	77.4	76.8	76.3	75.8	75.5	75.1	74.8	74.4
82.5°	57.7	57.0	56.3	55.9	55.8	55.8	55.7	55.6
85°	30.5	29.9	29.4	29.0	28.8	28.7	28.5	28.3
87.5°	10.7	10.4	10.1	9.9	9.8	9.7	9.6	9.5
90°	12.6	13.2	13.9	14.3	14.6	14.8	15.1	15.3
92.5°	13.8	14.1	14.4	14.7	14.8	15.0	15.1	15.3
95°	23.4	24.0	24.6	24.9	24.7	24.6	24.5	24.4
97.5°	30.6	31.1	31.6	31.9	32.1	32.2	32.4	32.6
100°	34.3	35.3	36.4	37.0	37.2	37.5	37.7	37.9
102.5°	35.8	37.2	38.4	39.3	39.6	40.0	40.3	40.7
105°	37.3	38.7	40.1	41.0	41.6	42.1	42.5	43.1
107.5°	45.6	44.1	42.8	42.3	42.8	43.3	43.8	44.3
110°	74.0	61.4	48.8	42.8	43.3	43.7	44.3	44.8





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	158.3	112.3	66.4	43.6	44.0	44.4	44.8	45.2
115°	233.1	174.8	116.5	82.7	73.7	64.6	55.5	46.5
117.5°	359.1	344.9	330.8	308.9	279.1	249.3	219.5	189.7
120°	418.4	419.9	421.4	413.7	396.6	379.7	362.7	345.7
122.5°	443.9	444.8	445.8	444.6	441.2	437.9	434.7	431.3
125°	480.6	481.5	482.4	483.0	483.4	483.8	484.1	484.5
127.5°	514.5	515.8	517.1	517.8	517.8	517.9	518.0	518.1
130°	536.0	537.4	538.8	539.4	539.3	539.2	539.0	538.9
132.5°	556.9	558.1	559.3	559.8	559.7	559.6	559.4	559.3
135°	586.8	588.0	589.3	589.8	589.5	589.3	589.0	588.7
137.5°	614.5	615.7	617.0	617.3	617.0	616.5	616.1	615.6
140°	632.4	633.5	634.7	634.9	634.3	633.7	633.0	632.4
142.5°	649.0	650.0	651.0	651.3	650.6	650.0	649.4	648.7
145°	672.2	673.0	673.9	674.0	673.4	672.8	672.2	671.5
147.5°	692.3	693.0	693.6	693.7	693.2	692.6	692.1	691.6
150°	704.7	705.5	706.2	706.3	705.7	705.0	704.4	703.8
152.5°	716.1	716.8	717.6	717.6	716.8	715.9	715.1	714.2
155°	731.4	732.1	732.9	732.8	731.7	730.8	729.8	728.7
157.5°	744.3	745.1	746.0	745.9	745.0	743.9	743.0	742.0
160°	751.8	752.6	753.3	753.2	752.3	751.5	750.6	749.7
162.5°	758.8	759.6	760.5	760.4	759.3	758.2	757.2	756.1
165°	767.3	768.3	769.1	769.1	768.3	767.3	766.4	765.6
167.5°	774.5	775.4	776.3	776.1	775.0	773.9	772.7	771.6
170°	778.1	779.0	779.9	779.7	778.6	777.4	776.3	775.2
172.5°	780.9	781.7	782.6	782.4	781.3	780.2	779.0	777.9
175°	783.8	784.7	785.5	785.4	784.1	782.8	781.6	780.3
177.5°	784.1	784.8	785.5	785.4	784.5	783.6	782.7	781.8
180°	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2

(END OF REPORT)