

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: P332585-940

Luminaire Tested: **SA4XXDIP-C795D365U940-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332585-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA4XXDIP-C795D365U940-4F0-1E-UDD-D4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

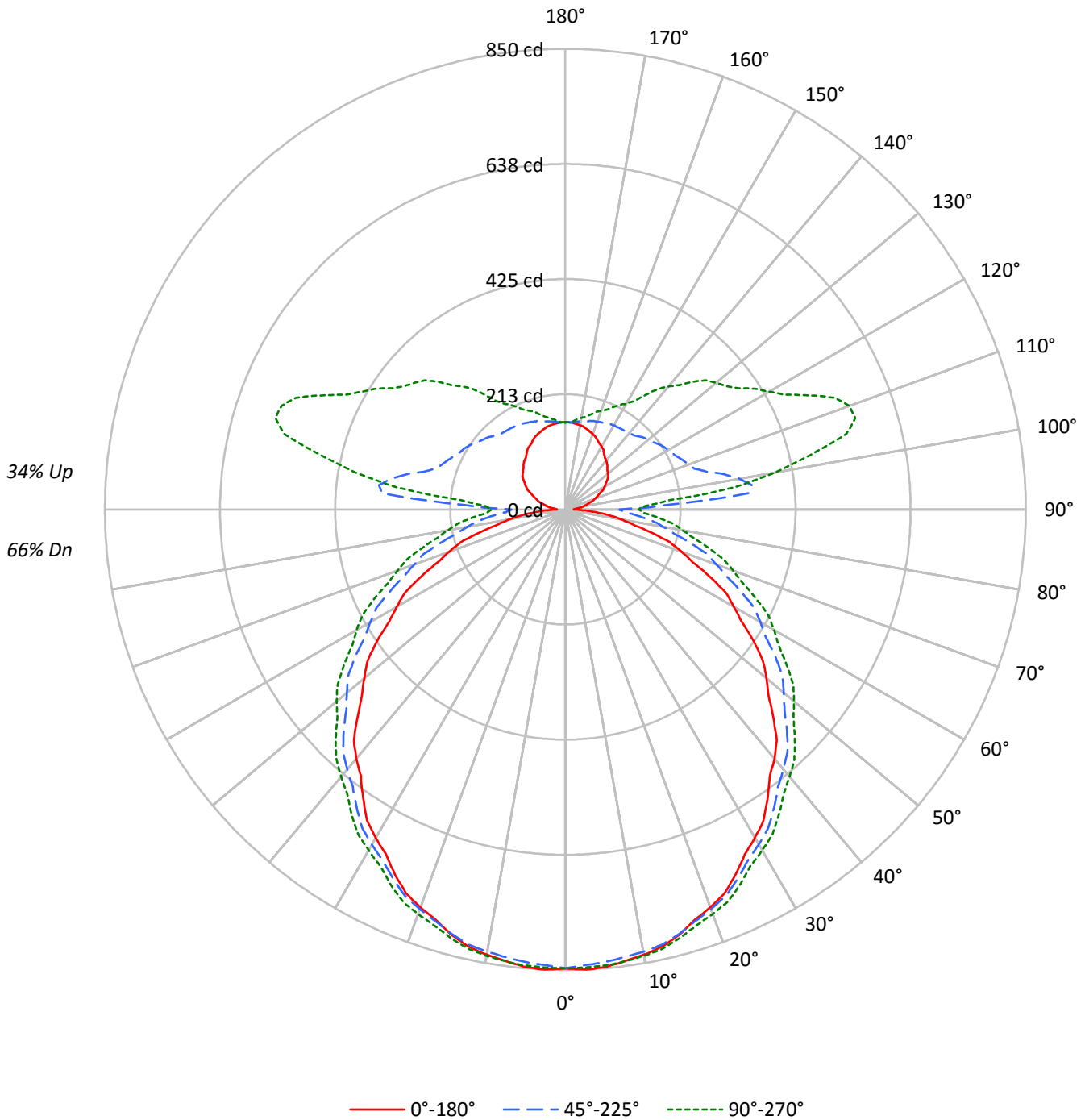
Lumens per Lamp: N/A  
Luminaire Lumens: 4054.9 lumens  
Efficiency: N/A  
Efficacy: 115.9 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: Semi-Direct

Input Watts (W): 35  
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	111	111	111	111	104	104	104	104	92	92	92	81	81	81	71	71	71	66				
1	100	95	90	86	94	89	85	82	79	76	73	69	67	65	60	59	57	53				
2	91	82	75	70	85	77	71	66	68	64	59	60	56	53	52	50	47	43				
3	82	72	64	57	77	68	60	55	60	54	49	53	48	44	46	42	39	36				
4	75	63	55	48	70	60	52	46	53	47	42	47	42	38	41	37	34	30				
5	69	56	48	41	64	53	45	39	47	41	36	42	36	32	37	32	29	26				
6	63	50	42	36	59	48	40	34	43	36	31	38	32	28	33	29	25	23				
7	59	46	37	31	55	43	35	30	39	32	27	34	29	25	30	26	22	20				
8	54	41	33	27	51	39	32	26	35	29	24	31	26	22	28	23	20	18				
9	51	38	30	25	48	36	29	24	32	26	22	29	24	20	26	21	18	16				
10	47	35	27	22	44	33	26	21	30	24	20	27	22	18	24	19	16	14				

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

	0°	45°	90°
0°	6838	6838	6838
5°	6859	6683	6702
10°	6817	6573	6568
15°	6756	6446	6411
20°	6664	6307	6259
25°	6560	6151	6092
30°	6448	5995	5919
35°	6321	5835	5768
40°	6219	5684	5610
45°	6067	5543	5475
50°	5939	5383	5333
55°	5808	5231	5164
60°	5601	5036	5013
65°	5376	4829	4824
70°	5101	4592	4605
75°	4723	4331	4407
80°	4295	4081	4213
85°	3763	3857	4101



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.2	2.0
10°-20°	229.8	5.7
20°-30°	347.5	8.6
30°-40°	420.4	10.4
40°-50°	444.5	11.0
50°-60°	418.3	10.3
60°-70°	347.1	8.6
70°-80°	243.8	6.0
80°-90°	138.7	3.4
90°-100°	197.7	4.9
100°-110°	301.7	7.4
110°-120°	256.6	6.3
120°-130°	204.6	5.0
130°-140°	161.4	4.0
140°-150°	117.7	2.9
150°-160°	81.4	2.0
160°-170°	47.8	1.2
170°-180°	15.6	0.4
0°-30°	657.5	16.2
0°-40°	1077.9	26.6
0°-60°	1940.7	47.9
0°-90°	2670.3	65.9
90°-120°	756.1	18.6
90°-150°	1239.8	30.6
90°-180°	1385.0	34.2
0°-180°	4054.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	847	847	847	847	847	
5°	848	845	838	846	845	80
15°	813	814	811	819	818	229
25°	744	749	752	762	764	342
35°	651	662	672	684	688	407
45°	542	561	578	594	599	419
55°	425	445	473	492	498	378
65°	294	324	357	379	388	291
75°	163	198	238	264	273	174
85°	50	90	133	160	171	53
90°	16	56	100	127	136	11
95°	23	77	339	234	194	21
105°	45	82	269	531	537	49
115°	71	97	229	419	498	70
125°	94	112	210	345	390	84
135°	109	130	190	291	333	85
145°	125	142	181	231	258	78
155°	141	152	176	199	208	65
165°	154	158	169	178	181	43
175°	160	160	162	164	163	15
180°	160	160	160	160	160	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0
2.5°	850.1	849.5	849.0	848.6	848.0	847.1	845.7	844.4	843.0	841.7	842.8
5°	847.9	847.3	846.7	846.1	845.4	844.4	842.8	841.4	839.9	838.5	840.2
7.5°	840.7	840.3	840.0	839.6	839.2	838.4	837.2	836.0	834.7	833.6	835.4
10°	834.6	834.5	834.3	834.0	833.8	833.2	832.1	831.1	830.0	828.9	830.9
12.5°	826.3	826.3	826.3	826.2	826.2	825.8	825.1	824.3	823.6	822.9	824.7
15°	812.9	813.1	813.2	813.5	813.7	813.5	812.9	812.3	811.5	810.9	812.9
17.5°	794.4	795.0	795.7	796.4	797.0	797.2	797.1	797.0	796.8	796.7	798.7
20°	781.6	782.2	782.8	783.5	784.1	784.5	784.7	784.9	785.2	785.3	787.5
22.5°	767.1	767.9	768.7	769.5	770.3	771.0	771.3	771.7	772.0	772.5	774.5
25°	743.6	744.8	746.2	747.4	748.7	749.7	750.3	750.9	751.5	752.2	754.5
27.5°	717.5	719.3	721.1	723.0	724.9	726.3	727.3	728.2	729.2	730.1	732.3
30°	700.0	701.7	703.4	705.1	706.8	708.3	709.8	711.2	712.7	714.2	716.5
32.5°	681.0	683.1	685.1	687.1	689.1	690.9	692.6	694.2	695.9	697.5	700.2
35°	650.7	653.2	655.8	658.3	660.8	663.1	665.2	667.4	669.4	671.5	674.5
37.5°	620.1	623.0	626.0	628.8	631.8	634.5	637.1	639.7	642.4	645.0	648.0
40°	600.4	603.2	605.8	608.6	611.4	614.2	617.2	620.1	623.0	626.0	629.2
42.5°	577.7	580.7	583.8	586.8	590.0	593.2	596.6	600.1	603.6	607.0	610.6
45°	542.5	546.5	550.5	554.6	558.6	562.6	566.6	570.6	574.5	578.5	582.2
47.5°	509.0	513.1	517.2	521.4	525.5	529.9	534.5	539.1	543.8	548.4	552.1
50°	484.6	489.3	493.9	498.6	503.2	507.8	512.5	517.1	521.7	526.4	530.7
52.5°	460.4	465.0	469.7	474.3	478.9	483.9	489.2	494.5	499.9	505.2	509.3
55°	424.9	429.4	433.8	438.2	442.6	448.0	454.3	460.7	467.0	473.3	477.5
57.5°	385.3	390.7	396.3	401.7	407.2	413.0	419.4	425.6	431.9	438.2	443.2
60°	359.4	365.0	370.4	375.9	381.4	387.6	394.6	401.5	408.5	415.4	420.3
62.5°	334.4	340.5	346.4	352.4	358.4	364.9	371.8	378.8	385.8	392.7	397.5
65°	294.0	300.8	307.6	314.2	321.0	328.0	335.1	342.3	349.5	356.6	361.9
67.5°	255.1	262.3	269.5	276.6	283.8	291.2	298.9	306.6	314.2	321.9	327.3
70°	228.5	235.8	242.9	250.1	257.3	264.8	272.9	280.9	288.8	296.9	302.6
72.5°	202.8	210.1	217.5	224.8	232.1	240.0	248.6	257.1	265.6	274.1	279.6
75°	163.2	170.9	178.7	186.5	194.3	202.7	211.5	220.3	229.3	238.1	244.0
77.5°	126.2	134.4	142.7	151.0	159.2	168.0	177.3	186.5	195.8	205.1	211.1
80°	103.3	111.8	120.2	128.7	137.1	146.0	155.2	164.5	173.8	183.1	189.4
82.5°	80.6	89.3	98.2	106.9	115.7	124.8	134.0	143.3	152.6	161.8	168.3
85°	50.3	59.1	67.9	76.9	85.7	94.9	104.3	113.8	123.3	132.8	139.1
87.5°	28.2	36.8	45.7	54.3	63.0	71.9	81.5	90.8	100.0	109.4	115.5
90°	15.5	24.5	33.9	42.7	51.5	60.2	71.2	80.2	89.9	99.6	105.4
92.5°	18.0	27.2	37.8	49.2	61.4	76.3	101.4	134.9	167.7	189.3	178.5
95°	22.7	30.7	40.8	51.8	66.3	87.4	123.4	183.7	267.7	339.4	352.3
97.5°	29.9	35.8	44.5	54.3	66.8	85.2	114.9	166.0	249.5	347.1	413.9
100°	34.4	39.9	47.5	56.8	68.3	85.2	112.0	155.9	228.4	325.5	411.9
102.5°	39.4	44.8	51.5	59.8	70.4	86.4	111.3	150.6	213.4	300.2	389.0
105°	45.4	50.6	56.4	64.4	74.3	89.3	112.4	146.2	198.2	269.4	348.7
107.5°	53.9	58.0	63.0	70.5	79.4	93.8	115.1	146.2	191.4	249.7	315.3
110°	58.9	62.5	67.1	73.8	82.4	96.1	117.3	146.8	188.9	241.9	298.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	63.8	67.0	71.4	77.6	85.9	99.2	119.6	147.4	186.9	235.9	286.3
115°	70.6	73.5	77.6	82.6	90.5	103.3	122.7	148.3	184.4	228.9	273.3
117.5°	78.7	80.8	83.8	88.5	95.2	107.7	126.0	149.7	182.3	222.9	264.0
120°	83.6	84.8	87.7	91.8	97.7	109.9	128.0	150.5	180.9	219.2	258.3
122.5°	88.5	89.3	91.7	95.0	101.0	112.5	130.3	151.4	179.7	215.1	252.5
125°	94.3	95.3	96.9	100.2	106.0	117.3	133.9	153.7	178.9	210.0	244.2
127.5°	99.9	100.7	102.8	106.6	112.5	123.3	138.4	155.7	177.1	203.6	233.9
130°	102.5	103.5	105.8	110.3	116.1	126.8	140.9	156.6	176.0	199.6	227.3
132.5°	105.7	106.5	109.6	113.9	120.1	130.0	143.4	158.2	175.4	196.3	221.6
135°	109.3	110.7	113.8	119.1	125.7	134.6	146.6	159.3	173.8	190.4	212.0
137.5°	114.0	114.9	118.2	123.1	129.7	137.9	148.3	159.5	171.7	185.9	204.1
140°	117.3	118.0	121.3	126.4	132.8	140.4	150.0	160.3	171.2	183.4	199.7
142.5°	120.0	120.9	124.1	129.1	135.5	142.7	151.8	161.0	171.0	181.9	196.4
145°	124.8	125.6	128.5	132.7	138.5	145.3	153.5	162.0	171.1	180.9	192.3
147.5°	130.5	130.5	133.0	137.4	142.1	148.3	156.0	163.5	171.5	179.8	188.9
150°	133.9	134.0	136.3	139.9	144.5	150.3	157.3	164.2	171.5	179.0	186.9
152.5°	136.4	136.5	138.9	142.4	146.6	152.1	158.3	164.7	170.9	177.7	184.9
155°	140.9	141.2	143.1	146.2	149.7	154.4	159.8	165.1	170.2	175.8	181.8
157.5°	145.3	145.3	147.1	149.5	152.6	156.3	160.9	165.1	169.3	173.9	178.8
160°	148.1	148.1	149.4	151.6	154.1	157.6	161.4	165.1	168.6	172.4	176.5
162.5°	150.6	150.4	151.4	153.4	155.6	158.4	161.8	165.1	167.8	170.9	174.5
165°	153.5	153.5	154.1	155.7	157.3	159.2	162.0	164.5	166.4	168.6	171.1
167.5°	156.3	156.0	156.3	157.5	158.4	159.9	161.9	163.7	164.9	166.3	168.1
170°	157.6	157.3	157.6	158.5	159.2	160.1	161.7	163.3	163.9	164.8	166.1
172.5°	158.8	158.5	158.5	159.3	159.6	160.3	161.4	162.7	162.9	163.3	164.3
175°	160.1	159.8	159.8	160.1	160.4	160.4	161.0	162.0	161.7	161.7	162.3
177.5°	160.7	160.4	160.2	160.4	160.4	160.4	160.7	161.1	160.7	160.7	161.0
180°	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0
2.5°	844.0	845.3	846.4	846.9	846.8	846.6	846.4	846.2
5°	841.9	843.6	845.2	846.0	845.7	845.5	845.3	845.1
7.5°	837.3	839.2	841.2	842.0	841.8	841.5	841.3	841.2
10°	832.8	834.6	836.6	837.4	837.2	837.0	836.8	836.6
12.5°	826.3	828.1	829.8	830.6	830.6	830.5	830.5	830.5
15°	814.8	816.6	818.5	819.4	819.2	818.9	818.8	818.5
17.5°	800.6	802.5	804.5	805.4	805.2	805.0	804.9	804.7
20°	789.5	791.7	793.8	794.9	794.9	794.9	794.9	794.9
22.5°	776.7	778.7	780.9	782.1	782.5	782.7	783.1	783.5
25°	756.8	759.1	761.4	762.7	762.9	763.1	763.3	763.6
27.5°	734.4	736.6	738.8	739.9	740.2	740.5	740.7	740.9
30°	718.8	721.1	723.4	724.9	725.3	725.7	726.1	726.6
32.5°	702.8	705.5	708.1	709.7	710.1	710.5	711.0	711.4
35°	677.4	680.4	683.3	685.1	685.7	686.3	687.1	687.7
37.5°	650.9	654.0	656.9	658.8	659.4	660.1	660.8	661.5
40°	632.3	635.5	638.6	640.6	641.5	642.3	643.2	644.0
42.5°	614.0	617.5	621.0	623.1	623.8	624.5	625.2	625.8
45°	585.8	589.3	592.9	595.2	596.3	597.4	598.4	599.4
47.5°	555.8	559.5	563.3	565.7	567.0	568.3	569.5	570.8
50°	534.8	539.0	543.2	546.0	547.2	548.6	549.8	551.1
52.5°	513.6	517.8	522.0	524.8	526.0	527.3	528.5	529.9
55°	481.7	486.0	490.2	492.9	494.2	495.4	496.7	497.9
57.5°	448.3	453.3	458.3	461.4	462.5	463.7	464.9	466.1
60°	425.2	430.0	434.8	438.1	439.8	441.5	443.2	444.9
62.5°	402.3	407.2	412.1	415.4	417.1	418.7	420.4	422.0
65°	367.2	372.5	377.7	381.2	382.9	384.6	386.2	387.9
67.5°	332.6	338.0	343.3	346.8	348.5	350.1	351.8	353.4
70°	308.3	314.0	319.7	323.2	324.7	326.2	327.6	329.1
72.5°	285.2	290.7	296.2	299.8	301.4	303.1	304.7	306.4
75°	249.9	255.7	261.7	265.6	267.5	269.4	271.3	273.1
77.5°	217.0	223.0	229.0	233.0	235.1	237.0	239.1	241.1
80°	195.7	202.1	208.4	212.3	214.0	215.7	217.4	219.1
82.5°	174.8	181.3	187.8	192.0	193.8	195.6	197.5	199.4
85°	145.4	151.8	158.1	162.3	164.4	166.5	168.6	170.8
87.5°	121.7	127.9	134.0	138.0	139.9	141.9	143.7	145.5
90°	111.8	118.2	124.7	128.6	130.5	132.6	133.9	135.6
92.5°	163.1	153.7	150.2	147.7	145.7	145.6	146.2	147.9
95°	327.4	284.3	247.7	221.0	207.4	199.6	195.7	193.6
97.5°	432.7	420.1	394.8	365.5	344.7	327.6	319.9	315.2
100°	463.5	475.5	465.8	446.0	420.1	402.3	394.4	393.3
102.5°	457.6	494.5	504.4	498.3	483.1	470.8	462.5	462.2
105°	426.1	485.9	522.4	538.8	541.1	540.3	537.5	537.3
107.5°	384.4	447.7	496.8	528.2	545.4	554.0	558.7	561.1
110°	359.1	418.4	469.0	506.9	531.0	545.9	553.2	557.8





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	339.0	391.9	439.8	477.7	504.7	522.5	532.1	538.3
115°	317.4	360.7	402.3	435.5	461.9	482.3	493.8	497.8
117.5°	303.3	339.7	373.2	401.8	424.8	442.4	454.2	457.9
120°	295.7	329.1	358.6	384.0	403.6	419.1	429.0	434.2
122.5°	288.8	321.4	348.5	371.0	387.7	401.1	409.5	414.5
125°	278.5	309.6	335.4	355.3	369.2	379.6	386.8	390.0
127.5°	266.1	295.8	321.3	340.4	354.5	364.0	370.5	373.8
130°	257.3	286.0	311.1	330.4	344.6	353.7	360.1	363.2
132.5°	248.6	275.6	300.1	319.3	333.2	343.4	349.5	352.6
135°	235.2	259.1	281.7	299.8	313.7	323.8	330.0	333.2
137.5°	223.7	244.1	263.4	279.7	292.6	302.3	307.5	310.9
140°	217.0	234.5	251.5	266.5	278.7	286.6	292.1	295.7
142.5°	211.2	226.7	241.2	254.4	265.0	272.3	277.1	279.8
145°	203.6	215.6	226.3	236.2	244.9	251.1	255.1	257.5
147.5°	197.3	206.0	213.7	221.1	227.6	232.8	235.9	237.1
150°	194.5	201.7	208.0	213.7	218.7	222.8	224.7	225.0
152.5°	191.7	198.0	203.8	208.4	212.7	216.0	217.1	217.5
155°	187.5	192.5	197.2	201.1	204.2	206.7	207.7	207.7
157.5°	183.1	187.3	191.3	194.3	196.6	198.6	199.1	199.1
160°	180.3	183.7	187.2	189.8	191.6	193.5	193.9	193.9
162.5°	177.5	180.5	183.2	185.5	186.8	188.7	189.0	188.8
165°	173.6	175.6	177.7	179.3	180.6	181.8	181.6	181.2
167.5°	170.0	171.4	173.2	174.1	174.7	175.6	175.5	175.2
170°	167.6	168.6	169.9	170.9	171.5	171.7	171.5	171.5
172.5°	165.7	166.3	167.1	167.8	168.2	168.4	168.2	167.6
175°	162.9	163.3	163.9	163.9	163.9	164.5	163.9	163.3
177.5°	161.1	161.4	161.4	161.7	161.4	161.7	161.1	160.7
180°	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4

(END OF REPORT)