

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: P332543-940

Luminaire Tested: **S124DIP-S575D365U940-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332543-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIP-S575D365U940-4F0-1E-UDD-F4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3389.8 lumens  
Efficiency: N/A  
Efficacy: 123.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Semi-Direct

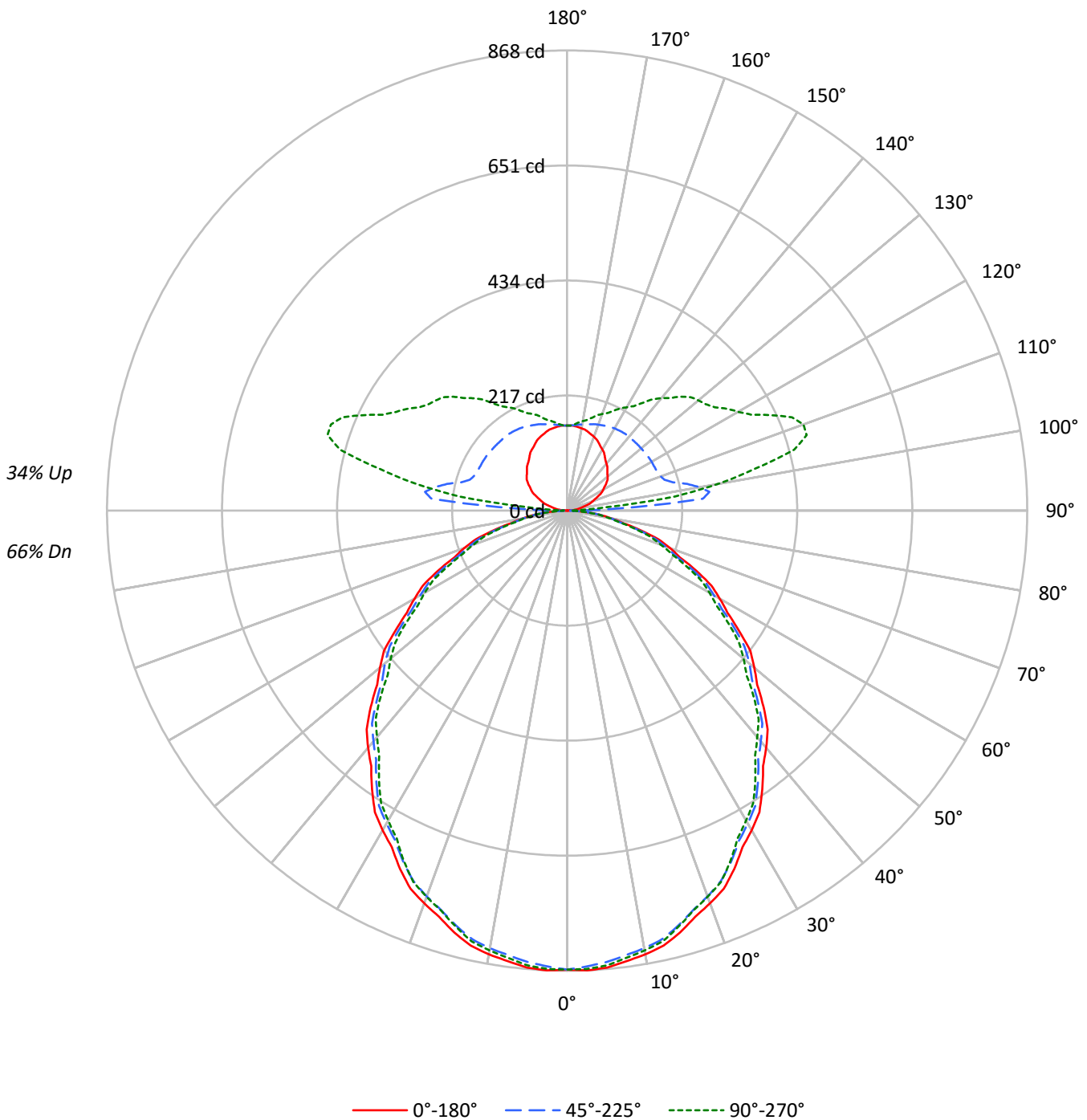
Input Watts (W): 27.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	111	111	111	111	104	104	104	104	92	92	92	81	81	81	70	70	70	66
1	101	97	93	89	95	91	88	84	81	78	76	71	69	67	62	61	59	55
2	92	85	78	73	86	80	74	69	71	66	63	62	59	56	55	52	50	46
3	84	74	67	61	79	70	63	58	62	57	53	55	51	48	49	45	43	39
4	77	66	58	51	72	62	55	49	56	50	45	49	45	41	43	40	37	34
5	71	59	50	44	66	56	48	42	50	44	39	44	39	35	39	35	32	29
6	65	53	44	38	61	50	42	37	45	39	34	40	35	31	35	31	28	26
7	60	48	40	34	57	45	38	33	41	35	30	36	31	28	32	28	25	23
8	56	43	36	30	53	41	34	29	37	31	27	33	28	25	30	26	23	20
9	52	40	32	27	49	38	31	26	34	28	24	31	26	22	28	23	20	18
10	49	37	29	24	46	35	28	23	32	26	22	29	24	20	26	21	19	17

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

	0°	45°	90°
0°	6990	6990	6990
5°	7012	6928	6978
10°	6968	6871	6906
15°	6884	6774	6791
20°	6772	6653	6659
25°	6644	6515	6495
30°	6488	6352	6293
35°	6326	6182	6099
40°	6157	5989	5879
45°	5981	5799	5688
50°	5786	5630	5456
55°	5576	5410	5234
60°	5365	5165	5007
65°	5129	4932	4732
70°	4865	4617	4440
75°	4457	4242	4133
80°	3966	3808	3710
85°	3473	3344	3279



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.6	2.4
10°-20°	229.8	6.8
20°-30°	338.2	10.0
30°-40°	393.2	11.6
40°-50°	393.2	11.6
50°-60°	343.9	10.1
60°-70°	255.4	7.5
70°-80°	145.1	4.3
80°-90°	42.8	1.3
90°-100°	115.9	3.4
100°-110°	241.1	7.1
110°-120°	216.0	6.4
120°-130°	181.7	5.4
130°-140°	151.5	4.5
140°-150°	115.7	3.4
150°-160°	81.3	2.4
160°-170°	47.8	1.4
170°-180°	15.6	0.5
0°-30°	649.5	19.2
0°-40°	1042.7	30.8
0°-60°	1779.8	52.5
0°-90°	2223.1	65.6
90°-120°	573.0	16.9
90°-150°	1021.9	30.1
90°-180°	1167.0	34.4
0°-180°	3389.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	866	866	866	866	866	
5°	865	862	855	862	861	82
15°	824	820	810	814	812	232
25°	746	741	731	732	729	343
35°	642	637	627	622	619	401
45°	524	519	508	501	498	404
55°	396	394	384	376	372	355
65°	268	265	258	251	248	266
75°	143	139	136	133	132	152
85°	38	37	36	36	35	41
90°	0	2	6	6	7	3
95°	10	33	257	127	77	12
105°	37	53	207	445	443	39
115°	65	81	184	354	426	64
125°	90	108	183	301	340	80
135°	108	128	182	268	304	83
145°	124	142	181	226	248	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°	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9
2.5°	868.2	867.8	867.5	867.1	866.7	865.9	864.5	863.2	861.7	860.4	861.7
5°	865.3	864.7	864.1	863.4	862.8	861.7	860.0	858.3	856.6	854.9	856.6
7.5°	857.2	856.6	856.0	855.4	854.8	853.5	851.7	849.8	847.8	846.0	847.4
10°	850.0	849.4	848.8	848.2	847.6	846.2	844.3	842.2	840.3	838.2	839.5
12.5°	840.6	840.0	839.4	838.7	838.1	836.8	834.6	832.5	830.4	828.2	829.6
15°	823.7	823.0	822.4	821.8	821.2	819.7	817.4	815.1	812.8	810.5	811.4
17.5°	803.3	802.5	801.7	800.9	800.1	798.7	796.5	794.3	792.1	790.0	790.5
20°	788.3	787.5	786.8	786.0	785.2	783.6	781.3	779.0	776.7	774.4	774.8
22.5°	772.1	771.2	770.2	769.1	768.1	766.4	764.1	761.8	759.5	757.2	758.0
25°	745.9	744.8	743.8	742.7	741.6	740.0	737.8	735.7	733.5	731.4	731.6
27.5°	716.0	714.9	713.7	712.7	711.5	710.0	707.9	706.0	703.9	702.0	701.6
30°	696.0	694.7	693.5	692.2	691.1	689.4	687.4	685.4	683.4	681.4	680.8
32.5°	674.8	673.8	672.6	671.5	670.5	668.8	666.7	664.6	662.5	660.3	659.6
35°	641.9	640.8	639.7	638.6	637.6	635.9	633.7	631.6	629.5	627.3	626.2
37.5°	607.0	606.0	605.0	604.0	603.1	601.5	599.1	596.8	594.5	592.2	591.0
40°	584.2	583.0	581.8	580.6	579.3	577.6	575.2	572.9	570.6	568.3	566.8
42.5°	559.8	559.1	558.4	557.6	556.9	555.2	552.7	550.1	547.5	545.0	543.2
45°	523.9	522.8	521.7	520.7	519.6	517.8	515.3	512.8	510.4	507.9	506.2
47.5°	486.2	485.5	484.8	484.0	483.3	481.8	479.6	477.2	474.9	472.7	470.7
50°	460.7	460.1	459.5	458.9	458.3	456.9	454.8	452.5	450.4	448.3	446.1
52.5°	435.8	435.1	434.3	433.5	432.8	431.3	429.0	426.8	424.5	422.1	420.3
55°	396.2	395.7	395.3	394.8	394.4	393.1	390.9	388.7	386.6	384.4	382.5
57.5°	358.5	357.9	357.4	356.9	356.3	355.1	352.9	350.8	348.7	346.5	344.7
60°	332.3	331.6	330.8	330.0	329.3	327.9	325.9	323.9	321.9	319.9	318.5
62.5°	306.8	306.2	305.5	304.9	304.3	302.8	300.8	298.6	296.5	294.4	293.1
65°	268.5	267.8	267.0	266.3	265.5	264.3	262.8	261.2	259.7	258.2	256.5
67.5°	230.0	229.3	228.5	227.8	227.1	226.0	224.5	223.1	221.6	220.1	218.6
70°	206.1	205.0	203.9	202.9	201.8	200.6	199.4	198.1	196.9	195.6	194.5
72.5°	180.6	179.5	178.4	177.3	176.2	175.2	174.2	173.3	172.3	171.2	170.2
75°	142.9	142.1	141.4	140.6	139.8	139.1	138.3	137.5	136.8	136.0	135.4
77.5°	107.0	106.6	106.3	106.0	105.7	105.1	104.4	103.8	103.1	102.5	102.2
80°	85.3	84.9	84.4	84.0	83.5	83.1	82.8	82.5	82.2	81.9	81.6
82.5°	64.3	64.0	63.8	63.6	63.4	63.2	63.2	63.1	63.0	63.0	62.8
85°	37.5	37.5	37.5	37.5	37.5	37.3	37.0	36.7	36.4	36.1	36.1
87.5°	14.5	14.5	14.5	14.5	14.4	14.4	14.5	14.4	14.4	14.4	14.4
90°	0.4	1.0	1.9	2.2	2.5	2.5	4.4	4.4	5.1	5.7	5.4
92.5°	3.6	5.3	8.2	12.0	16.7	23.2	39.2	63.7	87.5	100.0	83.3
95°	10.4	11.3	14.5	18.6	26.1	39.4	66.8	118.5	193.9	256.8	264.1
97.5°	18.6	18.6	21.4	25.1	31.7	42.7	63.8	106.6	181.4	270.5	331.8
100°	24.0	24.0	26.1	30.0	35.9	46.0	64.6	100.2	164.5	253.4	334.0
102.5°	29.0	29.5	31.5	35.0	40.8	50.3	67.1	98.4	153.2	231.9	315.1
105°	36.9	37.8	39.4	43.2	48.9	58.0	73.1	99.2	143.4	206.7	280.8
107.5°	45.6	46.2	47.8	51.8	57.2	66.3	80.1	104.0	141.6	192.6	253.1
110°	51.4	52.0	53.6	57.3	63.0	71.5	85.4	107.5	142.1	187.8	239.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	56.9	57.5	59.4	62.9	68.6	77.0	90.4	111.3	143.7	185.6	231.4
115°	64.9	65.9	68.0	71.2	77.2	85.7	98.4	117.3	146.5	184.4	224.1
117.5°	73.2	74.1	76.1	79.5	85.2	94.0	105.9	123.3	149.6	184.0	220.8
120°	78.8	79.5	81.6	85.1	90.4	99.2	111.3	127.6	151.9	184.0	219.0
122.5°	83.8	84.4	86.7	89.9	95.8	104.3	116.3	131.7	154.2	183.8	217.0
125°	90.4	91.7	93.6	97.1	103.1	111.9	123.2	137.7	157.6	183.4	213.7
127.5°	96.3	97.3	99.6	103.5	109.8	118.7	129.7	142.9	160.3	182.7	209.2
130°	99.6	100.9	103.3	108.1	114.0	123.2	133.9	146.2	162.3	182.4	206.4
132.5°	102.9	103.9	107.2	111.6	118.2	126.7	137.5	149.5	164.1	182.3	203.9
135°	107.5	108.7	111.9	117.3	123.9	132.1	142.4	153.8	166.7	181.8	200.1
137.5°	112.1	113.2	116.7	121.8	128.7	136.5	146.2	156.9	168.3	181.8	196.9
140°	115.4	116.3	119.8	125.1	131.7	139.3	148.7	158.8	169.5	181.6	195.1
142.5°	118.9	119.8	123.1	128.1	134.5	141.8	151.1	160.3	170.6	181.6	193.6
145°	123.9	124.8	128.0	132.3	138.4	145.3	153.5	162.0	171.1	180.9	191.0
147.5°	129.5	129.7	132.6	137.1	142.0	148.3	156.0	163.5	171.5	179.8	188.7
150°	133.0	133.3	135.8	139.6	144.4	150.3	157.3	164.2	171.5	179.0	186.9
152.5°	136.3	136.3	138.8	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°	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9
2.5°	862.9	864.2	865.4	865.9	865.8	865.7	865.6	865.4
5°	858.3	860.0	861.7	862.4	862.0	861.7	861.4	861.1
7.5°	848.7	850.1	851.4	852.0	851.9	851.7	851.5	851.2
10°	840.7	842.0	843.2	843.6	843.3	843.0	842.7	842.4
12.5°	831.0	832.3	833.7	834.1	833.7	833.2	832.9	832.4
15°	812.3	813.2	814.1	814.4	814.0	813.5	813.0	812.5
17.5°	791.1	791.7	792.3	792.4	792.1	791.8	791.5	791.2
20°	775.3	775.8	776.2	776.3	776.0	775.7	775.4	775.1
22.5°	758.8	759.6	760.5	760.6	760.1	759.6	759.0	758.4
25°	731.6	731.8	732.0	731.7	731.1	730.5	729.9	729.2
27.5°	701.2	700.8	700.4	699.9	699.1	698.4	697.6	696.8
30°	680.2	679.6	678.9	678.2	677.4	676.7	675.9	675.1
32.5°	658.8	658.1	657.4	656.6	655.9	655.1	654.2	653.5
35°	625.1	624.0	622.9	622.1	621.3	620.5	619.7	618.9
37.5°	589.9	588.6	587.5	586.4	585.4	584.3	583.4	582.3
40°	565.3	563.7	562.1	561.0	560.2	559.5	558.7	557.9
42.5°	541.4	539.6	537.8	536.6	536.2	535.7	535.1	534.6
45°	504.5	502.8	501.1	500.1	499.6	499.2	498.6	498.2
47.5°	468.9	466.9	465.0	463.5	462.4	461.1	459.9	458.8
50°	443.9	441.8	439.6	438.1	437.1	436.2	435.3	434.4
52.5°	418.3	416.4	414.6	413.0	411.8	410.6	409.5	408.3
55°	380.8	378.9	377.0	375.6	374.7	373.8	372.8	371.9
57.5°	343.0	341.3	339.5	338.1	337.2	336.4	335.5	334.6
60°	317.1	315.8	314.3	313.3	312.5	311.7	310.9	310.1
62.5°	291.9	290.5	289.3	288.3	287.5	286.8	286.0	285.2
65°	255.0	253.5	252.0	250.8	250.0	249.2	248.5	247.7
67.5°	217.1	215.7	214.2	213.3	213.1	212.9	212.7	212.5
70°	193.2	192.0	190.7	189.9	189.4	189.0	188.5	188.1
72.5°	169.2	168.3	167.3	166.6	166.1	165.7	165.2	164.7
75°	134.7	134.1	133.6	133.1	133.0	132.9	132.7	132.5
77.5°	102.0	101.8	101.7	101.4	100.9	100.6	100.1	99.8
80°	81.2	81.0	80.6	80.4	80.3	80.1	80.0	79.8
82.5°	62.6	62.4	62.2	62.1	62.0	61.8	61.6	61.4
85°	36.1	36.1	36.1	36.0	35.8	35.7	35.6	35.4
87.5°	14.4	14.5	14.6	14.6	14.6	14.7	14.6	14.6
90°	5.7	6.0	6.3	6.3	6.6	7.0	6.6	6.6
92.5°	61.9	46.5	37.1	30.8	27.0	25.3	24.3	24.3
95°	233.5	184.7	142.4	111.9	96.4	86.7	81.0	76.9
97.5°	345.0	326.9	296.0	263.1	240.5	221.6	212.1	205.5
100°	380.0	386.4	371.0	347.6	320.2	301.0	291.5	289.0
102.5°	378.4	409.6	414.0	404.3	387.5	373.6	363.6	361.6
105°	352.9	407.5	438.7	451.7	452.3	449.7	445.3	443.4
107.5°	317.0	375.1	418.9	447.1	462.6	469.8	473.0	473.8
110°	295.3	349.8	395.6	430.2	452.5	465.8	471.4	474.3





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	279.4	327.6	370.8	405.5	430.9	446.9	454.9	459.4
115°	263.5	302.2	339.1	369.3	394.2	413.1	423.3	425.8
117.5°	255.7	287.8	316.7	342.4	363.6	379.5	389.7	391.6
120°	252.1	281.4	306.7	329.0	347.0	360.9	369.1	372.6
122.5°	249.1	277.4	300.3	319.9	335.1	347.0	353.9	357.4
125°	244.0	271.0	292.7	310.1	322.7	331.9	337.9	339.7
127.5°	237.6	263.5	285.3	301.7	314.3	322.4	327.5	329.4
130°	232.6	257.5	278.9	295.6	308.5	316.4	321.5	323.3
132.5°	227.3	250.7	271.6	288.3	301.0	309.9	314.7	316.6
135°	220.0	240.5	259.7	275.4	288.0	296.9	301.9	303.8
137.5°	213.4	230.7	246.9	261.1	273.0	281.6	285.8	288.0
140°	209.6	224.4	238.5	251.8	262.9	269.7	274.2	276.7
142.5°	206.1	219.1	231.2	242.7	252.5	259.0	262.9	264.6
145°	201.1	211.8	221.2	230.1	237.9	243.3	246.5	248.0
147.5°	197.0	205.5	213.0	220.0	225.8	230.4	232.7	233.4
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)