

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: P332540-930

Luminaire Tested: **S124DIP-S575D365U930-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332540-930  
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-S575D365U930-4F0-1E-UDD-D4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 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: 2998.8 lumens  
Efficiency: N/A  
Efficacy: 109.0 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: General Diffuse

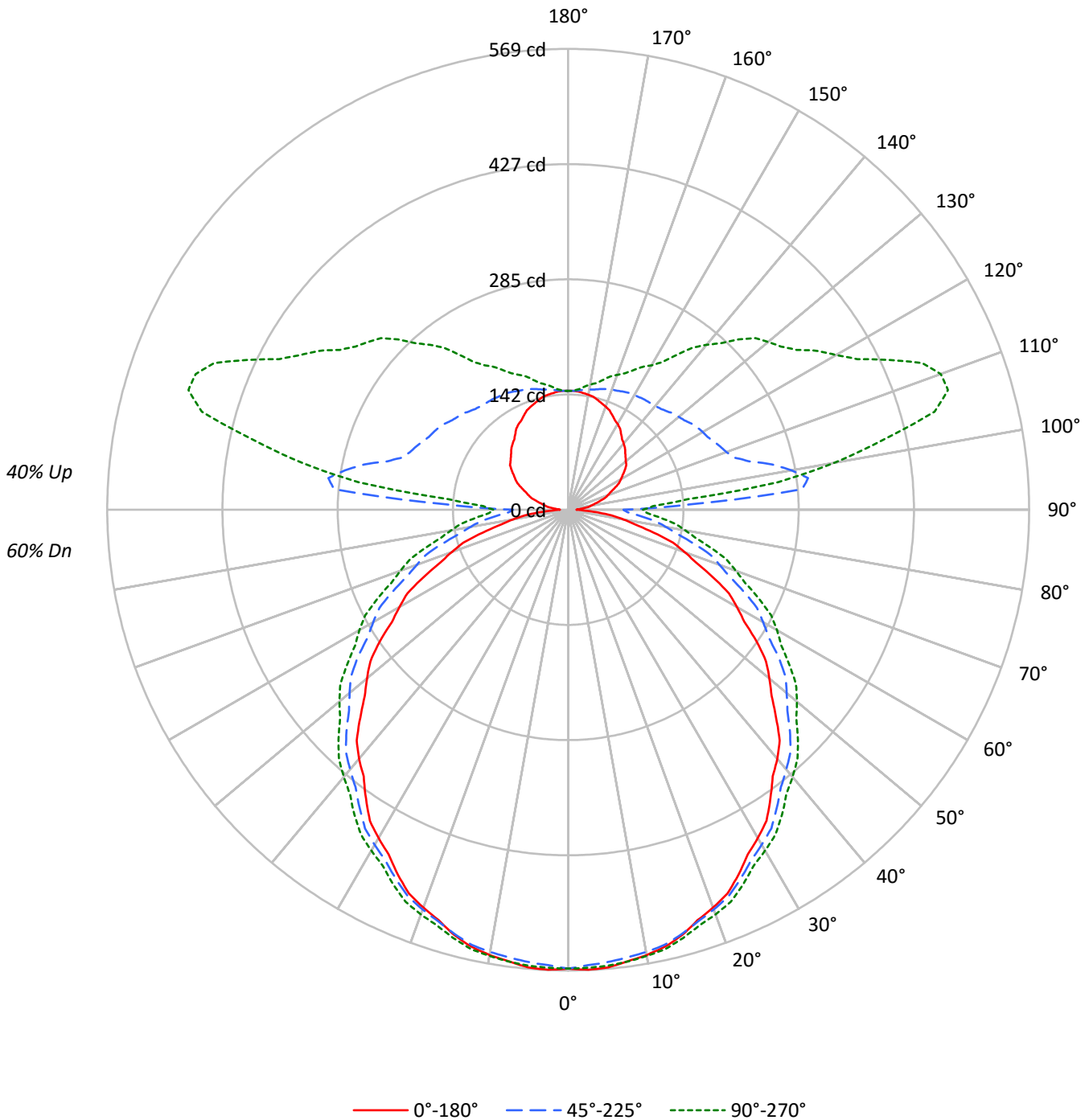
Input Watts (W): 27.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20										
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	109	109	109	109	102	102	102	102	89	89	89	76	76	76	65	65	65	60																				
1	99	94	89	85	92	88	84	80	76	73	70	65	63	61	55	54	52	48																				
2	89	81	74	69	83	76	70	65	66	61	57	57	53	50	48	46	43	39																				
3	81	71	63	57	75	66	59	54	58	52	48	50	45	42	42	39	36	32																				
4	74	63	54	48	69	59	51	45	51	45	40	44	39	35	37	34	31	27																				
5	68	56	47	41	63	52	44	39	46	39	35	39	34	31	34	30	27	24																				
6	63	50	41	35	58	47	39	33	41	35	30	35	30	27	30	26	23	21																				
7	58	45	37	31	54	42	35	29	37	31	26	32	27	23	28	24	21	18																				
8	54	41	33	27	50	38	31	26	34	28	23	29	24	21	25	21	18	16																				
9	50	37	29	24	46	35	28	23	31	25	21	27	22	19	23	19	17	14																				
10	47	34	27	22	43	32	25	21	28	23	19	25	20	17	22	18	15	13																				

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

	0°	45°	90°
0°	4574	4574	4574
5°	4588	4470	4482
10°	4560	4397	4393
15°	4519	4312	4289
20°	4458	4219	4187
25°	4388	4114	4074
30°	4313	4011	3959
35°	4227	3903	3858
40°	4160	3802	3753
45°	4059	3708	3663
50°	3973	3600	3567
55°	3884	3499	3454
60°	3746	3369	3353
65°	3597	3231	3227
70°	3414	3072	3080
75°	3157	2896	2948
80°	2873	2730	2819
85°	2514	2579	2742



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.6	1.8
10°-20°	153.7	5.1
20°-30°	232.4	7.8
30°-40°	281.2	9.4
40°-50°	297.3	9.9
50°-60°	279.8	9.3
60°-70°	232.1	7.7
70°-80°	163.1	5.4
80°-90°	93.0	3.1
90°-100°	160.7	5.4
100°-110°	261.0	8.7
110°-120°	224.7	7.5
120°-130°	181.5	6.1
130°-140°	145.1	4.8
140°-150°	107.2	3.6
150°-160°	74.4	2.5
160°-170°	43.7	1.5
170°-180°	14.2	0.5
0°-30°	439.8	14.7
0°-40°	721.0	24.0
0°-60°	1298.1	43.3
0°-90°	1786.3	59.6
90°-120°	646.3	21.6
90°-150°	1080.1	36.0
90°-180°	1212.0	40.4
0°-180°	2998.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	567	567	567	567	567	
5°	567	565	561	566	565	54
15°	544	544	542	548	548	153
25°	497	501	503	510	511	229
35°	435	443	449	458	460	272
45°	363	375	387	397	401	280
55°	284	298	317	329	333	253
65°	197	217	239	254	260	195
75°	109	133	159	176	183	116
85°	34	60	89	107	114	36
90°	10	38	68	86	92	7
95°	18	59	290	188	148	17
105°	40	68	231	464	468	42
115°	63	85	198	367	438	63
125°	85	101	186	305	344	76
135°	100	118	172	260	297	77
145°	114	130	165	210	233	72
155°	129	139	161	182	190	59
165°	140	145	154	163	166	40
175°	146	147	148	150	149	14
180°	147	147	147	147	147	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6
2.5°	568.6	568.3	567.9	567.5	567.2	566.6	565.7	564.8	563.9	563.0	563.8
5°	567.2	566.8	566.3	565.9	565.5	564.8	563.8	562.8	561.8	560.8	562.0
7.5°	562.4	562.1	561.8	561.6	561.3	560.8	560.0	559.2	558.3	557.5	558.8
10°	558.3	558.2	558.0	557.9	557.7	557.3	556.6	555.9	555.2	554.5	555.8
12.5°	552.7	552.7	552.7	552.6	552.6	552.4	551.9	551.4	550.9	550.4	551.5
15°	543.7	543.9	544.0	544.1	544.3	544.1	543.7	543.3	542.8	542.4	543.7
17.5°	531.4	531.8	532.2	532.6	533.1	533.3	533.2	533.1	533.0	533.0	534.2
20°	522.8	523.2	523.6	524.1	524.5	524.7	524.9	525.1	525.1	525.3	526.7
22.5°	513.1	513.6	514.2	514.7	515.3	515.7	515.9	516.2	516.4	516.7	518.1
25°	497.4	498.2	499.1	499.9	500.8	501.4	501.8	502.2	502.7	503.1	504.7
27.5°	479.9	481.1	482.3	483.6	484.9	485.8	486.4	487.1	487.7	488.4	489.8
30°	468.2	469.4	470.4	471.6	472.7	473.8	474.7	475.7	476.7	477.8	479.3
32.5°	455.5	456.9	458.2	459.6	461.0	462.2	463.3	464.4	465.5	466.6	468.3
35°	435.2	436.9	438.6	440.3	442.0	443.5	444.9	446.4	447.8	449.1	451.2
37.5°	414.8	416.7	418.7	420.6	422.6	424.4	426.2	428.0	429.7	431.4	433.4
40°	401.6	403.4	405.3	407.1	409.0	410.8	412.8	414.7	416.8	418.7	420.9
42.5°	386.4	388.4	390.4	392.6	394.6	396.8	399.1	401.4	403.7	406.0	408.4
45°	362.9	365.6	368.3	371.0	373.6	376.3	379.0	381.6	384.3	387.0	389.4
47.5°	340.5	343.2	345.9	348.7	351.5	354.4	357.5	360.6	363.7	366.8	369.3
50°	324.2	327.3	330.4	333.5	336.6	339.7	342.8	345.9	349.0	352.1	354.9
52.5°	307.9	311.0	314.1	317.2	320.3	323.7	327.3	330.8	334.4	337.9	340.7
55°	284.2	287.1	290.2	293.1	296.0	299.6	303.9	308.1	312.3	316.6	319.4
57.5°	257.7	261.4	265.1	268.7	272.4	276.3	280.5	284.7	288.9	293.1	296.4
60°	240.4	244.1	247.8	251.4	255.1	259.3	263.9	268.6	273.2	277.9	281.1
62.5°	223.7	227.7	231.7	235.7	239.7	244.0	248.7	253.3	258.0	262.7	265.9
65°	196.7	201.2	205.7	210.2	214.7	219.4	224.1	228.9	233.7	238.6	242.1
67.5°	170.6	175.5	180.3	185.1	189.8	194.8	199.9	205.0	210.2	215.3	218.9
70°	152.9	157.7	162.5	167.3	172.1	177.2	182.5	187.8	193.2	198.6	202.4
72.5°	135.7	140.6	145.4	150.3	155.2	160.5	166.2	171.9	177.7	183.4	187.0
75°	109.1	114.3	119.5	124.7	130.0	135.6	141.5	147.4	153.4	159.2	163.2
77.5°	84.4	89.9	95.5	100.9	106.5	112.3	118.5	124.7	130.9	137.1	141.1
80°	69.1	74.8	80.5	86.1	91.7	97.6	103.9	110.1	116.3	122.5	126.7
82.5°	53.9	59.8	65.6	71.5	77.4	83.4	89.6	95.8	102.0	108.3	112.6
85°	33.6	39.5	45.5	51.4	57.3	63.4	69.8	76.1	82.5	88.8	93.0
87.5°	18.8	24.7	30.7	36.4	42.2	48.2	54.7	60.9	67.2	73.5	77.5
90°	10.4	16.6	23.2	29.1	35.0	40.8	48.7	54.7	61.4	68.0	71.8
92.5°	13.0	19.5	27.3	35.9	45.2	56.7	77.5	105.8	133.7	151.2	139.9
95°	17.8	23.2	30.8	39.2	50.8	68.1	99.0	152.0	226.7	290.0	300.4
97.5°	24.5	28.5	35.1	42.5	52.4	67.4	92.5	137.2	211.4	298.6	358.3
100°	28.9	32.5	38.2	45.3	54.5	68.3	90.8	128.8	193.1	279.9	357.4
102.5°	33.5	37.2	42.2	48.6	57.1	70.1	90.9	124.9	180.3	257.7	337.5
105°	39.5	43.1	47.4	53.6	61.6	74.0	93.1	122.2	167.8	230.9	302.1
107.5°	47.3	50.1	53.9	59.9	67.2	79.0	96.6	123.4	162.7	214.3	273.0
110°	52.0	54.6	58.0	63.4	70.6	81.9	99.5	124.6	161.2	207.9	258.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	56.6	58.9	62.4	67.3	74.3	85.3	102.2	126.0	160.3	203.3	248.3
115°	63.2	65.3	68.6	72.7	79.5	90.2	106.2	128.0	159.3	198.4	237.8
117.5°	70.6	72.2	74.8	78.7	84.5	95.1	110.3	130.4	158.7	194.3	230.8
120°	75.2	76.2	78.7	82.3	87.6	97.9	112.9	132.0	158.2	191.8	226.6
122.5°	79.8	80.5	82.6	85.6	91.1	100.9	115.7	133.6	158.0	189.0	222.2
125°	85.2	86.3	87.8	90.8	96.2	106.0	119.8	136.6	158.3	185.5	215.8
127.5°	90.5	91.2	93.2	96.7	102.2	111.6	124.4	139.3	157.8	181.0	207.7
130°	92.9	94.0	96.1	100.3	105.7	115.0	127.1	140.6	157.6	178.2	202.7
132.5°	96.0	96.8	99.6	103.5	109.3	118.1	129.6	142.5	157.6	176.0	198.3
135°	99.5	100.7	103.5	108.4	114.5	122.5	133.0	144.4	157.2	171.9	190.9
137.5°	103.7	104.7	107.7	112.3	118.4	125.7	135.1	145.2	156.2	169.0	184.8
140°	106.7	107.5	110.5	115.2	121.2	128.1	136.9	146.2	156.1	167.2	181.5
142.5°	109.4	110.3	113.2	117.8	123.6	130.3	138.6	147.0	156.3	166.2	178.9
145°	113.9	114.6	117.3	121.2	126.5	132.8	140.3	148.1	156.5	165.4	175.5
147.5°	119.0	119.1	121.6	125.6	130.0	135.6	142.6	149.4	156.8	164.4	172.6
150°	122.2	122.4	124.6	127.8	132.1	137.5	143.8	150.1	156.8	163.6	170.9
152.5°	124.7	124.7	127.0	130.2	134.0	139.1	144.7	150.6	156.3	162.5	169.0
155°	128.8	129.1	130.9	133.7	136.9	141.2	146.1	151.0	155.6	160.8	166.2
157.5°	132.9	132.9	134.5	136.7	139.5	142.9	147.1	151.0	154.8	159.0	163.5
160°	135.4	135.4	136.6	138.6	140.9	144.1	147.6	151.0	154.2	157.6	161.3
162.5°	137.7	137.5	138.4	140.2	142.3	144.8	148.0	151.0	153.4	156.2	159.6
165°	140.3	140.3	140.9	142.4	143.8	145.5	148.1	150.4	152.1	154.2	156.5
167.5°	142.9	142.6	142.9	144.0	144.8	146.2	148.1	149.7	150.7	152.1	153.7
170°	144.1	143.8	144.1	145.0	145.5	146.3	147.8	149.3	149.9	150.7	151.9
172.5°	145.2	145.0	145.0	145.6	145.9	146.6	147.6	148.8	149.0	149.3	150.3
175°	146.3	146.1	146.1	146.3	146.7	146.7	147.2	148.1	147.8	147.8	148.4
177.5°	146.9	146.7	146.4	146.7	146.7	146.7	146.9	147.3	146.9	146.9	147.2
180°	146.7	146.7	146.7	146.7	146.7	146.7	146.7	146.7	146.7	146.7	146.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6
2.5°	564.6	565.3	566.1	566.5	566.4	566.2	566.1	566.1
5°	563.1	564.2	565.3	565.8	565.7	565.6	565.4	565.2
7.5°	560.1	561.3	562.6	563.2	563.0	562.9	562.7	562.6
10°	557.0	558.3	559.5	560.1	560.0	559.9	559.7	559.5
12.5°	552.8	553.9	555.1	555.6	555.6	555.5	555.5	555.5
15°	544.9	546.3	547.5	548.0	548.0	547.8	547.6	547.5
17.5°	535.5	536.8	538.1	538.7	538.6	538.5	538.3	538.3
20°	528.2	529.5	530.9	531.7	531.7	531.7	531.7	531.7
22.5°	519.5	520.9	522.3	523.2	523.3	523.6	523.8	524.1
25°	506.2	507.8	509.3	510.1	510.3	510.5	510.5	510.7
27.5°	491.3	492.7	494.2	495.0	495.1	495.3	495.5	495.6
30°	480.9	482.4	484.0	484.9	485.1	485.4	485.7	486.0
32.5°	470.1	471.9	473.7	474.7	475.0	475.2	475.6	475.8
35°	453.1	455.1	457.1	458.3	458.7	459.1	459.5	460.0
37.5°	435.5	437.4	439.4	440.7	441.1	441.6	442.0	442.5
40°	423.0	425.1	427.2	428.5	429.1	429.7	430.2	430.8
42.5°	410.7	413.0	415.4	416.8	417.3	417.7	418.2	418.6
45°	391.8	394.2	396.6	398.1	398.8	399.6	400.2	401.0
47.5°	371.8	374.3	376.7	378.4	379.3	380.1	381.0	381.8
50°	357.8	360.6	363.4	365.3	366.1	366.9	367.8	368.6
52.5°	343.6	346.3	349.2	351.0	351.9	352.7	353.5	354.4
55°	322.2	325.1	327.8	329.7	330.5	331.4	332.2	333.0
57.5°	299.8	303.2	306.6	308.6	309.4	310.1	311.0	311.8
60°	284.4	287.6	290.8	293.0	294.2	295.3	296.4	297.6
62.5°	269.1	272.4	275.7	277.8	278.9	280.1	281.2	282.3
65°	245.6	249.2	252.7	254.9	256.1	257.2	258.4	259.5
67.5°	222.5	226.1	229.7	232.0	233.1	234.2	235.3	236.4
70°	206.2	210.0	213.8	216.2	217.2	218.2	219.2	220.1
72.5°	190.7	194.4	198.1	200.5	201.6	202.7	203.8	204.9
75°	167.1	171.0	175.0	177.7	178.9	180.2	181.5	182.7
77.5°	145.2	149.2	153.2	155.9	157.2	158.6	159.9	161.3
80°	130.9	135.1	139.3	142.0	143.2	144.3	145.4	146.6
82.5°	116.9	121.2	125.6	128.4	129.6	130.9	132.1	133.4
85°	97.3	101.5	105.7	108.6	110.0	111.4	112.8	114.2
87.5°	81.7	85.9	89.9	92.6	93.9	95.2	96.4	97.7
90°	76.1	80.6	85.0	87.6	88.9	90.3	91.2	92.4
92.5°	124.3	114.3	109.6	106.3	104.0	103.6	103.8	104.9
95°	276.3	235.5	200.6	175.3	162.4	154.7	150.8	148.3
97.5°	374.1	361.2	336.7	309.1	289.6	273.5	266.0	261.3
100°	403.3	412.9	402.6	383.7	359.5	343.0	335.3	334.0
102.5°	398.9	431.2	439.0	432.5	418.2	406.6	398.6	397.9
105°	371.6	425.0	457.1	471.2	473.0	471.7	468.8	468.2
107.5°	334.9	391.5	435.1	463.1	478.3	485.9	489.8	491.5
110°	312.7	365.7	410.7	444.7	466.2	479.5	485.8	489.5





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	295.4	342.6	385.1	419.0	443.4	459.1	467.5	472.9
115°	276.9	315.4	352.3	382.0	405.7	424.0	434.2	437.5
117.5°	265.6	297.9	327.3	352.8	373.3	389.0	399.5	402.4
120°	259.7	289.3	315.1	337.5	355.1	368.9	377.6	381.8
122.5°	254.3	283.0	306.8	326.7	341.5	353.4	360.8	364.9
125°	246.1	273.6	296.2	313.8	326.1	335.3	341.7	344.2
127.5°	236.3	262.5	284.9	301.7	314.2	322.6	328.2	330.8
130°	229.2	254.5	276.5	293.5	306.2	314.2	319.7	322.3
132.5°	222.1	245.9	267.4	284.3	296.8	305.7	311.0	313.6
135°	211.3	232.4	252.2	268.2	280.5	289.4	294.9	297.4
137.5°	201.9	219.9	236.8	251.2	262.6	271.3	275.8	278.6
140°	196.6	211.9	226.7	240.1	250.9	258.0	262.7	265.7
142.5°	191.8	205.4	218.1	229.8	239.2	245.7	249.9	252.1
145°	185.6	196.2	205.7	214.4	222.2	227.6	231.1	233.1
147.5°	180.3	188.2	195.3	201.9	207.6	212.3	214.9	215.9
150°	177.8	184.4	190.2	195.3	200.0	203.7	205.5	205.7
152.5°	175.3	181.0	186.3	190.5	194.4	197.5	198.5	198.9
155°	171.5	176.0	180.3	183.8	186.7	189.0	189.9	189.9
157.5°	167.4	171.2	174.9	177.7	179.8	181.6	182.1	182.1
160°	164.9	168.0	171.1	173.5	175.2	176.9	177.2	177.2
162.5°	162.3	165.0	167.5	169.6	170.8	172.5	172.8	172.6
165°	158.7	160.5	162.5	164.0	165.1	166.2	166.0	165.7
167.5°	155.4	156.7	158.3	159.1	159.7	160.5	160.5	160.2
170°	153.3	154.2	155.3	156.2	156.8	157.0	156.8	156.8
172.5°	151.5	152.1	152.8	153.4	153.8	154.0	153.8	153.3
175°	149.0	149.3	149.9	149.9	149.9	150.4	149.9	149.3
177.5°	147.3	147.6	147.6	147.8	147.6	147.8	147.3	146.9
180°	146.7	146.7	146.7	146.7	146.7	146.7	146.7	146.7

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