

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: P332540-927

Luminaire Tested: **S124DIP-S575D365U927-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332540-927  
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-S575D365U927-4F0-1E-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: 2913.7 lumens  
Efficiency: N/A  
Efficacy: 106.0 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

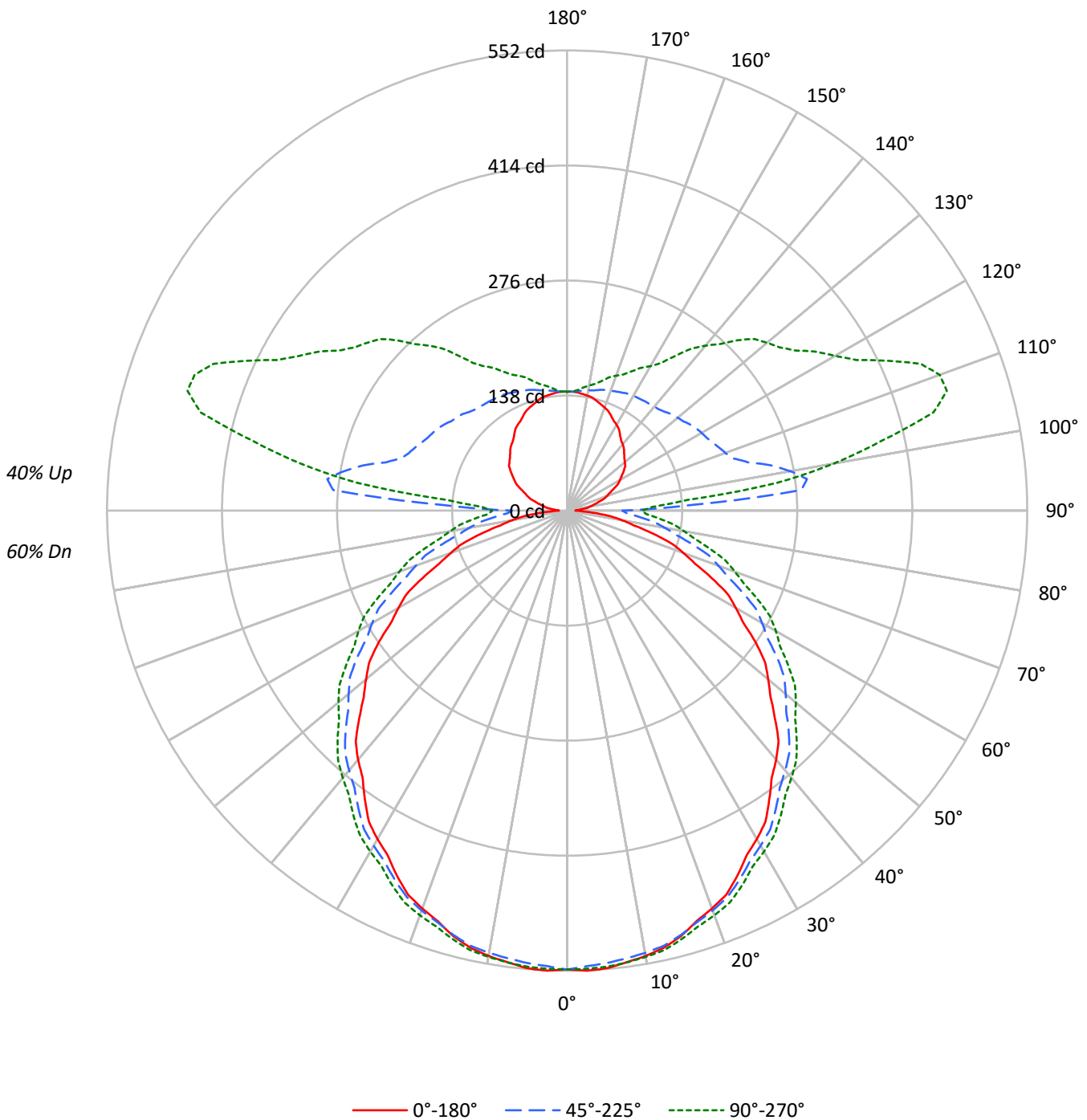
Input Watts (W): 27.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	4444	4444	4444
5°	4458	4343	4355
10°	4431	4273	4269
15°	4391	4190	4167
20°	4331	4099	4068
25°	4264	3998	3958
30°	4191	3896	3847
35°	4108	3792	3748
40°	4041	3694	3646
45°	3943	3603	3558
50°	3860	3498	3465
55°	3775	3400	3356
60°	3640	3274	3257
65°	3494	3139	3136
70°	3315	2985	2993
75°	3068	2814	2864
80°	2794	2652	2738
85°	2439	2507	2665



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.1	1.8
10°-20°	149.4	5.1
20°-30°	225.8	7.8
30°-40°	273.2	9.4
40°-50°	288.9	9.9
50°-60°	271.9	9.3
60°-70°	225.6	7.7
70°-80°	158.4	5.4
80°-90°	90.4	3.1
90°-100°	156.1	5.4
100°-110°	253.6	8.7
110°-120°	218.3	7.5
120°-130°	176.3	6.1
130°-140°	141.0	4.8
140°-150°	104.1	3.6
150°-160°	72.3	2.5
160°-170°	42.5	1.5
170°-180°	13.8	0.5
0°-30°	427.3	14.7
0°-40°	700.6	24.0
0°-60°	1261.3	43.3
0°-90°	1735.7	59.6
90°-120°	628.0	21.6
90°-150°	1049.5	36.0
90°-180°	1178.0	40.4
0°-180°	2913.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	550	550	550	550	550	
5°	551	549	545	550	549	52
15°	528	529	527	532	532	149
25°	483	487	489	495	496	223
35°	423	430	436	445	447	265
45°	353	364	376	386	390	272
55°	276	289	308	319	324	246
65°	191	211	232	247	252	189
75°	106	129	155	171	178	113
85°	33	59	86	104	111	35
90°	10	37	66	84	90	7
95°	17	58	282	183	144	17
105°	38	66	224	451	455	41
115°	61	82	193	357	425	61
125°	83	98	180	296	334	74
135°	97	115	167	253	289	75
145°	111	126	161	204	226	70
155°	125	135	156	177	184	58
165°	136	141	150	159	161	38
175°	142	142	144	146	145	13
180°	142	142	142	142	142	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5
2.5°	552.5	552.2	551.8	551.4	551.1	550.6	549.7	548.8	547.9	547.0	547.8
5°	551.1	550.7	550.2	549.9	549.5	548.7	547.8	546.8	545.9	544.9	546.1
7.5°	546.4	546.1	545.9	545.7	545.4	544.9	544.2	543.4	542.5	541.7	543.0
10°	542.5	542.3	542.2	542.1	541.9	541.5	540.8	540.1	539.5	538.8	540.0
12.5°	537.0	537.0	537.0	536.9	536.9	536.7	536.2	535.8	535.3	534.8	535.9
15°	528.3	528.5	528.5	528.7	528.9	528.7	528.3	527.9	527.4	527.0	528.3
17.5°	516.3	516.7	517.1	517.5	518.0	518.2	518.1	518.0	517.9	517.8	519.0
20°	507.9	508.3	508.7	509.2	509.6	509.8	510.0	510.2	510.2	510.4	511.7
22.5°	498.6	499.1	499.6	500.1	500.7	501.1	501.3	501.5	501.8	502.0	503.4
25°	483.3	484.1	485.0	485.8	486.6	487.2	487.6	488.0	488.5	488.9	490.4
27.5°	466.3	467.5	468.7	469.9	471.1	472.0	472.6	473.2	473.9	474.5	475.9
30°	455.0	456.1	457.1	458.2	459.3	460.3	461.3	462.2	463.2	464.2	465.7
32.5°	442.6	443.9	445.2	446.6	447.9	449.1	450.1	451.2	452.3	453.4	455.0
35°	422.9	424.5	426.2	427.8	429.4	430.9	432.3	433.7	435.1	436.4	438.4
37.5°	403.1	404.9	406.8	408.7	410.6	412.4	414.1	415.8	417.5	419.1	421.1
40°	390.2	392.0	393.8	395.5	397.4	399.2	401.1	403.0	405.0	406.9	408.9
42.5°	375.4	377.4	379.4	381.4	383.4	385.6	387.8	390.0	392.3	394.5	396.8
45°	352.6	355.2	357.8	360.4	363.0	365.6	368.2	370.8	373.4	376.0	378.3
47.5°	330.8	333.4	336.1	338.8	341.5	344.4	347.4	350.4	353.4	356.4	358.9
50°	315.0	318.0	321.0	324.1	327.1	330.1	333.1	336.1	339.1	342.1	344.8
52.5°	299.2	302.2	305.2	308.2	311.2	314.5	318.0	321.4	324.9	328.3	331.1
55°	276.2	279.0	281.9	284.8	287.6	291.1	295.2	299.4	303.5	307.6	310.4
57.5°	250.4	254.0	257.5	261.1	264.7	268.5	272.5	276.6	280.7	284.8	288.0
60°	233.6	237.2	240.7	244.3	247.9	251.9	256.4	260.9	265.5	270.0	273.1
62.5°	217.4	221.3	225.1	229.0	232.9	237.1	241.6	246.1	250.7	255.2	258.3
65°	191.1	195.5	199.9	204.2	208.7	213.2	217.8	222.4	227.1	231.8	235.2
67.5°	165.8	170.5	175.2	179.8	184.4	189.3	194.2	199.2	204.2	209.2	212.7
70°	148.5	153.2	157.9	162.6	167.2	172.1	177.3	182.5	187.7	193.0	196.6
72.5°	131.8	136.6	141.3	146.1	150.8	156.0	161.5	167.1	172.6	178.2	181.7
75°	106.0	111.1	116.1	121.2	126.3	131.7	137.4	143.2	149.0	154.7	158.6
77.5°	82.0	87.4	92.8	98.1	103.5	109.2	115.2	121.2	127.2	133.2	137.1
80°	67.2	72.6	78.2	83.7	89.1	94.8	100.9	106.9	113.0	119.0	123.1
82.5°	52.4	58.1	63.8	69.5	75.2	81.0	87.1	93.1	99.1	105.2	109.4
85°	32.6	38.4	44.2	49.9	55.7	61.6	67.8	74.0	80.2	86.3	90.4
87.5°	18.3	24.0	29.8	35.4	41.0	46.8	53.2	59.2	65.3	71.4	75.3
90°	10.1	16.2	22.5	28.3	34.0	39.7	47.3	53.2	59.7	66.1	69.8
92.5°	12.6	18.9	26.5	34.9	43.9	55.1	75.3	102.8	129.9	146.9	135.9
95°	17.3	22.6	29.9	38.1	49.4	66.1	96.2	147.7	220.2	281.8	291.9
97.5°	23.8	27.7	34.1	41.3	50.9	65.5	89.8	133.3	205.4	290.2	348.2
100°	28.0	31.6	37.2	44.0	52.9	66.4	88.2	125.2	187.7	272.0	347.3
102.5°	32.6	36.1	41.0	47.2	55.5	68.1	88.3	121.4	175.2	250.4	328.0
105°	38.3	41.9	46.0	52.1	59.9	71.9	90.5	118.7	163.0	224.3	293.6
107.5°	45.9	48.7	52.4	58.2	65.3	76.8	93.9	119.9	158.1	208.3	265.3
110°	50.5	53.1	56.3	61.6	68.6	79.5	96.6	121.0	156.6	202.0	250.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	55.0	57.3	60.6	65.4	72.2	82.9	99.3	122.4	155.7	197.5	241.3
115°	61.4	63.5	66.6	70.7	77.2	87.6	103.1	124.4	154.8	192.7	231.1
117.5°	68.6	70.2	72.6	76.4	82.1	92.4	107.2	126.7	154.2	188.8	224.3
120°	73.0	74.1	76.4	79.9	85.1	95.1	109.7	128.3	153.8	186.3	220.1
122.5°	77.6	78.2	80.2	83.2	88.5	98.0	112.4	129.8	153.5	183.6	215.9
125°	82.8	83.8	85.3	88.2	93.5	103.0	116.5	132.8	153.8	180.2	209.7
127.5°	87.9	88.6	90.5	94.0	99.3	108.4	120.9	135.3	153.4	175.9	201.8
130°	90.3	91.3	93.4	97.4	102.7	111.8	123.5	136.7	153.1	173.2	196.9
132.5°	93.2	94.0	96.8	100.6	106.2	114.7	126.0	138.5	153.1	171.0	192.7
135°	96.7	97.8	100.6	105.4	111.3	119.0	129.2	140.3	152.7	167.1	185.5
137.5°	100.8	101.7	104.6	109.1	115.0	122.2	131.3	141.1	151.8	164.2	179.6
140°	103.7	104.4	107.3	111.9	117.7	124.5	133.0	142.0	151.7	162.5	176.3
142.5°	106.3	107.2	110.0	114.5	120.1	126.6	134.7	142.8	151.9	161.5	173.8
145°	110.7	111.4	114.0	117.8	122.9	129.0	136.3	143.9	152.0	160.7	170.5
147.5°	115.7	115.7	118.1	122.0	126.3	131.7	138.6	145.2	152.3	159.7	167.7
150°	118.7	118.9	121.0	124.2	128.3	133.6	139.7	145.8	152.3	159.0	166.0
152.5°	121.2	121.2	123.4	126.5	130.2	135.1	140.6	146.3	151.9	157.9	164.2
155°	125.2	125.4	127.1	129.9	133.0	137.2	142.0	146.7	151.2	156.2	161.5
157.5°	129.1	129.1	130.7	132.8	135.5	138.9	142.9	146.7	150.4	154.5	158.8
160°	131.6	131.6	132.7	134.7	136.9	140.0	143.4	146.7	149.8	153.1	156.8
162.5°	133.8	133.6	134.5	136.3	138.2	140.7	143.8	146.7	149.1	151.8	155.0
165°	136.3	136.3	136.9	138.3	139.7	141.4	143.9	146.2	147.8	149.8	152.0
167.5°	138.9	138.6	138.9	139.9	140.7	142.0	143.9	145.4	146.5	147.7	149.3
170°	140.0	139.7	140.0	140.9	141.4	142.2	143.6	145.0	145.6	146.4	147.6
172.5°	141.1	140.9	140.9	141.5	141.8	142.4	143.4	144.6	144.7	145.0	146.0
175°	142.2	142.0	142.0	142.2	142.5	142.5	143.1	143.9	143.6	143.6	144.2
177.5°	142.8	142.5	142.3	142.5	142.5	142.5	142.8	143.1	142.8	142.8	143.0
180°	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5
2.5°	548.6	549.3	550.1	550.4	550.3	550.2	550.1	550.0
5°	547.2	548.2	549.3	549.8	549.7	549.5	549.4	549.2
7.5°	544.2	545.4	546.7	547.2	547.1	546.9	546.8	546.7
10°	541.2	542.5	543.7	544.2	544.2	544.0	543.8	543.7
12.5°	537.1	538.2	539.3	539.9	539.9	539.8	539.8	539.8
15°	529.5	530.8	532.0	532.5	532.4	532.3	532.1	532.0
17.5°	520.3	521.6	522.8	523.4	523.3	523.2	523.1	523.0
20°	513.2	514.5	515.9	516.6	516.6	516.6	516.6	516.6
22.5°	504.8	506.1	507.5	508.3	508.5	508.7	509.0	509.2
25°	491.9	493.4	494.9	495.7	495.8	496.0	496.1	496.2
27.5°	477.4	478.7	480.1	480.9	481.1	481.3	481.4	481.6
30°	467.2	468.7	470.2	471.1	471.3	471.7	471.9	472.2
32.5°	456.8	458.5	460.3	461.2	461.5	461.8	462.1	462.3
35°	440.3	442.2	444.1	445.3	445.7	446.1	446.5	446.9
37.5°	423.1	425.0	427.0	428.2	428.6	429.0	429.4	429.9
40°	411.0	413.0	415.1	416.4	416.9	417.5	418.0	418.6
42.5°	399.1	401.3	403.6	405.0	405.4	405.8	406.3	406.7
45°	380.7	383.0	385.3	386.8	387.5	388.2	388.9	389.6
47.5°	361.2	363.7	366.1	367.7	368.5	369.3	370.2	371.0
50°	347.6	350.4	353.1	354.9	355.7	356.5	357.4	358.1
52.5°	333.8	336.5	339.3	341.0	341.9	342.7	343.5	344.4
55°	313.1	315.8	318.5	320.4	321.2	322.0	322.8	323.6
57.5°	291.3	294.6	297.9	299.8	300.6	301.3	302.1	302.9
60°	276.3	279.5	282.6	284.7	285.8	286.9	288.0	289.1
62.5°	261.5	264.7	267.8	269.9	271.0	272.1	273.2	274.3
65°	238.6	242.1	245.5	247.7	248.8	249.9	251.0	252.2
67.5°	216.2	219.7	223.2	225.4	226.5	227.5	228.6	229.7
70°	200.3	204.1	207.7	210.1	211.0	212.0	212.9	213.9
72.5°	185.3	188.9	192.5	194.8	195.9	196.9	198.0	199.1
75°	162.4	166.2	170.1	172.6	173.8	175.1	176.3	177.5
77.5°	141.1	145.0	148.9	151.5	152.7	154.1	155.3	156.7
80°	127.2	131.3	135.4	138.0	139.1	140.2	141.3	142.4
82.5°	113.6	117.8	122.1	124.8	126.0	127.1	128.3	129.6
85°	94.5	98.6	102.7	105.5	106.9	108.2	109.6	111.0
87.5°	79.4	83.4	87.4	90.0	91.3	92.5	93.6	94.9
90°	74.0	78.3	82.5	85.1	86.4	87.8	88.6	89.8
92.5°	120.8	111.1	106.5	103.3	101.1	100.7	100.8	102.0
95°	268.5	228.8	195.0	170.3	157.8	150.4	146.6	144.1
97.5°	363.5	350.9	327.2	300.3	281.4	265.7	258.5	253.9
100°	391.9	401.2	391.2	372.8	349.4	333.3	325.8	324.6
102.5°	387.6	419.0	426.6	420.3	406.4	395.1	387.3	386.6
105°	361.1	413.0	444.1	457.9	459.5	458.4	455.5	455.0
107.5°	325.4	380.4	422.8	450.0	464.8	472.1	475.9	477.6
110°	303.8	355.4	399.1	432.1	453.0	465.9	472.0	475.6





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	287.0	332.9	374.2	407.1	430.8	446.1	454.2	459.5
115°	269.0	306.5	342.3	371.1	394.2	412.0	421.9	425.1
117.5°	258.1	289.5	318.1	342.8	362.7	378.0	388.2	391.0
120°	252.3	281.1	306.2	328.0	345.1	358.5	366.9	371.0
122.5°	247.1	275.0	298.1	317.4	331.8	343.4	350.5	354.6
125°	239.2	265.9	287.8	304.9	316.9	325.8	332.0	334.5
127.5°	229.6	255.1	276.8	293.1	305.3	313.5	318.9	321.5
130°	222.7	247.2	268.7	285.2	297.5	305.3	310.6	313.1
132.5°	215.8	238.9	259.8	276.2	288.4	297.1	302.1	304.7
135°	205.3	225.8	245.0	260.5	272.5	281.2	286.5	289.0
137.5°	196.2	213.7	230.0	244.1	255.2	263.6	268.0	270.7
140°	191.0	205.9	220.3	233.3	243.8	250.6	255.2	258.2
142.5°	186.4	199.6	211.9	223.2	232.4	238.8	242.8	244.9
145°	180.3	190.6	199.9	208.3	215.9	221.2	224.6	226.5
147.5°	175.2	182.8	189.7	196.1	201.7	206.3	208.8	209.8
150°	172.8	179.2	184.8	189.8	194.3	198.0	199.6	199.9
152.5°	170.3	175.9	181.0	185.1	188.9	191.9	192.9	193.2
155°	166.6	171.0	175.2	178.6	181.4	183.6	184.5	184.5
157.5°	162.6	166.4	169.9	172.6	174.7	176.4	176.9	176.9
160°	160.2	163.2	166.3	168.6	170.2	171.9	172.2	172.2
162.5°	157.7	160.3	162.7	164.8	166.0	167.6	167.9	167.7
165°	154.2	156.0	157.9	159.3	160.4	161.5	161.3	161.0
167.5°	151.0	152.3	153.8	154.6	155.2	156.0	155.9	155.7
170°	148.9	149.8	150.9	151.8	152.3	152.6	152.3	152.3
172.5°	147.2	147.7	148.5	149.1	149.4	149.6	149.4	148.9
175°	144.7	145.0	145.6	145.6	145.6	146.2	145.6	145.0
177.5°	143.1	143.4	143.4	143.6	143.4	143.6	143.1	142.8
180°	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5

(END OF REPORT)