

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: P332900-940

Luminaire Tested: **S124RDIP-S575D365U940-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332900-940
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: S124RDIP-S575D365U940-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3261.3 lumens
Efficiency: N/A
Efficacy: 118.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Direct

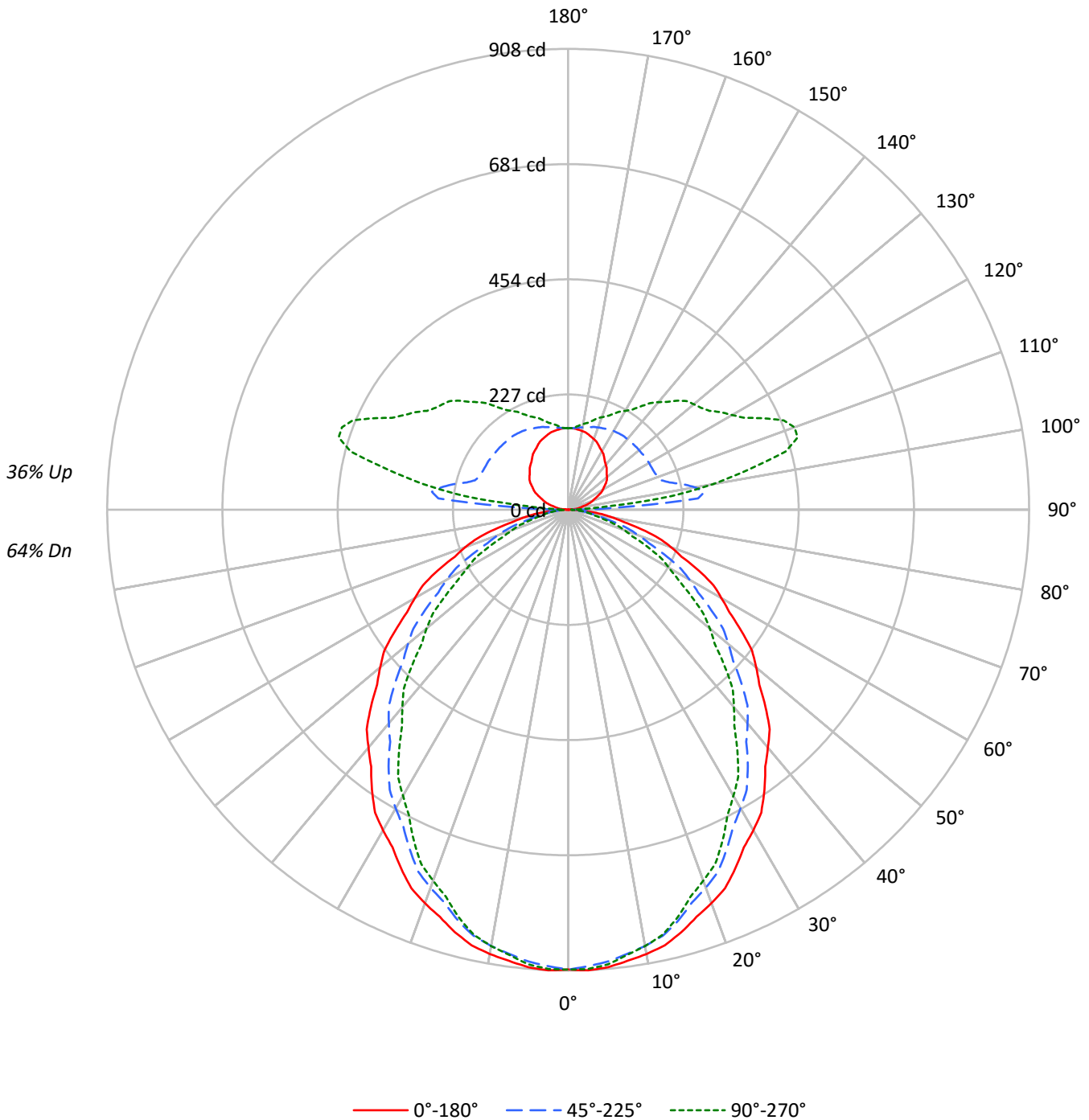
Input Watts (W): 27.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	91	91	91	80	80	80	69	69	69	64
1	101	97	93	90	95	91	88	85	81	78	76	71	69	67	62	60	59	55
2	93	85	79	74	87	80	75	70	71	67	63	63	59	57	55	52	50	46
3	85	75	68	62	79	71	64	59	63	58	54	56	52	48	49	46	43	40
4	78	67	59	53	73	63	56	51	56	51	46	50	45	42	44	40	38	34
5	71	60	52	46	67	57	49	44	51	45	40	45	40	36	40	36	33	30
6	66	54	46	40	62	51	44	38	46	40	35	41	36	32	36	32	29	26
7	61	49	41	35	57	46	39	34	42	36	31	37	32	29	33	29	26	24
8	57	44	37	31	53	42	35	30	38	32	28	34	29	26	30	26	23	21
9	53	41	33	28	50	39	32	27	35	29	25	31	27	23	28	24	21	19
10	50	37	30	25	47	36	29	24	32	27	23	29	24	21	26	22	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7316	7316	7316
5°	7332	7243	7288
10°	7287	7156	7156
15°	7203	7005	6954
20°	7088	6808	6682
25°	6942	6576	6409
30°	6797	6332	6068
35°	6640	6080	5724
40°	6450	5792	5352
45°	6275	5505	4975
50°	6075	5176	4575
55°	5859	4835	4141
60°	5624	4459	3697
65°	5408	3989	3261
70°	5094	3472	2769
75°	4697	2879	2249
80°	4096	2194	2064
85°	3473	1991	1871



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.1	2.6
10°-20°	237.4	7.3
20°-30°	342.8	10.5
30°-40°	388.6	11.9
40°-50°	375.2	11.5
50°-60°	312.0	9.6
60°-70°	215.4	6.6
70°-80°	109.2	3.3
80°-90°	28.9	0.9
90°-100°	115.9	3.6
100°-110°	241.1	7.4
110°-120°	216.0	6.6
120°-130°	181.7	5.6
130°-140°	151.5	4.6
140°-150°	115.7	3.5
150°-160°	81.3	2.5
160°-170°	47.8	1.5
170°-180°	15.6	0.5
0°-30°	665.3	20.4
0°-40°	1053.9	32.3
0°-60°	1741.1	53.4
0°-90°	2094.6	64.2
90°-120°	573.0	17.6
90°-150°	1021.9	31.3
90°-180°	1167.0	35.8
0°-180°	3261.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	906	906	906	906	906	
5°	905	902	894	900	899	86
15°	862	855	838	837	832	243
25°	779	766	738	727	720	359
35°	674	651	617	594	581	421
45°	550	523	482	449	436	424
55°	416	388	344	309	294	372
65°	283	252	209	180	171	279
75°	151	125	92	77	72	159
85°	38	24	22	20	20	42
90°	0	2	6	6	7	2
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°	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2
2.5°	908.5	907.9	907.5	907.0	906.5	905.5	904.2	902.9	901.4	900.1	901.4
5°	904.8	904.2	903.6	902.9	902.4	901.2	899.3	897.4	895.5	893.8	895.3
7.5°	896.6	896.0	895.4	894.7	894.0	892.5	890.1	887.7	885.3	882.9	883.9
10°	888.9	888.1	887.3	886.5	885.8	884.0	881.3	878.4	875.7	872.9	873.5
12.5°	878.9	878.0	877.1	876.2	875.3	873.3	870.0	866.7	863.4	860.1	860.5
15°	861.8	860.4	859.1	857.6	856.2	853.6	849.8	846.0	842.0	838.2	837.9
17.5°	841.2	839.1	837.1	835.1	833.1	829.8	825.2	820.6	815.9	811.3	810.5
20°	825.0	823.0	821.0	819.0	817.0	813.4	808.2	802.9	797.6	792.5	791.2
22.5°	807.3	805.0	802.8	800.5	798.3	794.3	788.7	783.1	777.5	771.9	770.0
25°	779.3	776.5	773.6	770.9	768.1	763.6	757.2	750.9	744.6	738.3	735.7
27.5°	749.8	746.4	742.9	739.4	735.8	730.8	724.0	717.3	710.5	703.7	700.5
30°	729.2	725.4	721.6	717.7	713.9	708.3	701.1	693.8	686.5	679.3	675.5
32.5°	707.7	703.3	698.9	694.6	690.3	684.3	676.8	669.3	661.8	654.3	649.9
35°	673.8	668.9	663.9	659.0	654.1	647.7	640.0	632.3	624.6	616.9	611.6
37.5°	637.6	632.5	627.4	622.3	617.2	610.4	601.8	593.3	584.8	576.2	570.3
40°	612.0	606.9	601.8	596.7	591.7	584.7	576.0	567.1	558.4	549.6	543.1
42.5°	587.5	582.3	576.9	571.6	566.2	559.0	549.8	540.6	531.5	522.4	515.8
45°	549.6	543.9	538.1	532.4	526.7	519.2	510.0	500.8	491.5	482.2	474.7
47.5°	510.3	504.4	498.5	492.6	486.7	478.9	469.3	459.8	450.1	440.5	432.7
50°	483.7	477.6	471.6	465.6	459.6	451.7	441.8	431.9	422.0	412.1	404.5
52.5°	456.5	450.6	444.7	438.8	432.8	424.9	414.7	404.7	394.5	384.4	376.6
55°	416.3	410.2	404.0	397.8	391.6	383.5	373.5	363.6	353.5	343.5	335.5
57.5°	376.7	370.2	363.8	357.4	351.0	342.9	333.0	323.1	313.3	303.4	295.2
60°	348.3	342.1	336.0	329.8	323.7	315.7	305.8	295.9	286.1	276.2	268.1
62.5°	322.8	316.4	310.0	303.5	297.1	288.9	278.7	268.7	258.5	248.4	241.0
65°	283.1	276.5	269.8	263.2	256.5	248.3	238.4	228.6	218.7	208.8	202.2
67.5°	241.9	235.5	229.2	222.8	216.5	208.7	199.6	190.4	181.3	172.1	166.4
70°	215.8	209.3	202.9	196.4	189.9	182.3	173.4	164.7	155.9	147.1	142.0
72.5°	188.1	182.2	176.3	170.5	164.6	157.6	149.3	141.0	132.6	124.3	120.0
75°	150.6	144.9	139.2	133.5	127.8	121.3	114.0	106.7	99.5	92.3	88.7
77.5°	112.5	107.7	102.9	98.0	93.2	87.8	81.9	76.2	70.3	64.4	62.3
80°	88.1	83.6	79.2	74.7	70.3	65.7	61.1	56.4	51.8	47.2	46.7
82.5°	67.1	63.0	58.9	54.8	50.6	47.3	44.6	41.9	39.3	36.6	36.3
85°	37.5	34.4	31.3	28.2	25.1	23.4	22.9	22.5	21.9	21.5	21.2
87.5°	12.8	11.9	11.1	10.3	9.4	8.7	9.0	8.9	8.9	8.9	8.7
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°	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2
2.5°	902.9	904.2	905.5	906.2	906.1	905.9	905.8	905.7
5°	896.8	898.4	899.9	900.5	900.2	899.9	899.6	899.3
7.5°	884.8	885.8	886.9	887.1	886.6	886.1	885.6	885.1
10°	874.1	874.8	875.4	875.4	874.8	874.1	873.5	872.9
12.5°	860.9	861.2	861.7	861.4	860.5	859.7	858.8	857.9
15°	837.6	837.3	837.0	836.3	835.2	834.1	833.0	832.0
17.5°	809.6	808.7	807.8	806.6	804.9	803.3	801.6	800.0
20°	790.0	788.7	787.5	785.9	783.9	781.9	779.9	777.8
22.5°	768.2	766.3	764.5	762.8	761.1	759.5	757.9	756.2
25°	733.1	730.4	727.8	725.8	724.2	722.6	721.1	719.5
27.5°	697.2	694.0	690.8	688.0	685.8	683.6	681.4	679.2
30°	671.6	667.7	663.9	660.8	658.3	655.8	653.4	650.9
32.5°	645.4	641.0	636.4	633.0	630.7	628.4	626.0	623.7
35°	606.4	601.1	595.9	591.9	589.2	586.3	583.5	580.8
37.5°	564.5	558.7	552.8	548.5	545.6	542.9	540.1	537.3
40°	536.6	530.1	523.6	519.1	516.2	513.4	510.7	507.9
42.5°	509.2	502.6	496.0	491.2	488.3	485.4	482.5	479.7
45°	467.2	459.6	452.0	446.8	444.1	441.3	438.5	435.8
47.5°	424.8	417.0	409.1	403.7	400.6	397.6	394.6	391.5
50°	396.7	389.1	381.3	376.0	373.1	370.1	367.2	364.3
52.5°	368.7	360.9	353.1	347.7	344.6	341.5	338.5	335.5
55°	327.4	319.4	311.4	305.9	303.0	300.1	297.1	294.2
57.5°	287.0	278.9	270.8	265.6	263.4	261.2	259.0	256.7
60°	260.1	252.1	244.1	238.9	236.4	233.9	231.5	229.0
62.5°	233.6	226.2	218.8	214.1	212.1	210.2	208.2	206.3
65°	195.6	189.0	182.4	178.1	176.3	174.4	172.5	170.7
67.5°	160.7	155.0	149.3	145.4	143.4	141.3	139.3	137.2
70°	137.0	131.9	126.7	123.4	121.9	120.4	118.8	117.3
72.5°	115.7	111.3	106.9	104.1	102.6	101.2	99.8	98.4
75°	85.2	81.7	78.1	75.9	74.9	74.0	73.1	72.1
77.5°	60.3	58.2	56.1	54.9	54.7	54.4	54.1	53.9
80°	46.3	45.8	45.3	45.0	44.9	44.7	44.6	44.4
82.5°	35.9	35.6	35.3	35.0	34.9	34.7	34.6	34.4
85°	20.9	20.6	20.2	20.2	20.2	20.2	20.2	20.2
87.5°	8.6	8.6	8.6	8.6	8.7	8.9	9.0	9.1
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)