

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: P332900-935

Luminaire Tested: **S124RDIP-S575D365U935-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332900-935
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-S575D365U935-4F0-1E-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: 3149.0 lumens
Efficiency: N/A
Efficacy: 114.5 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

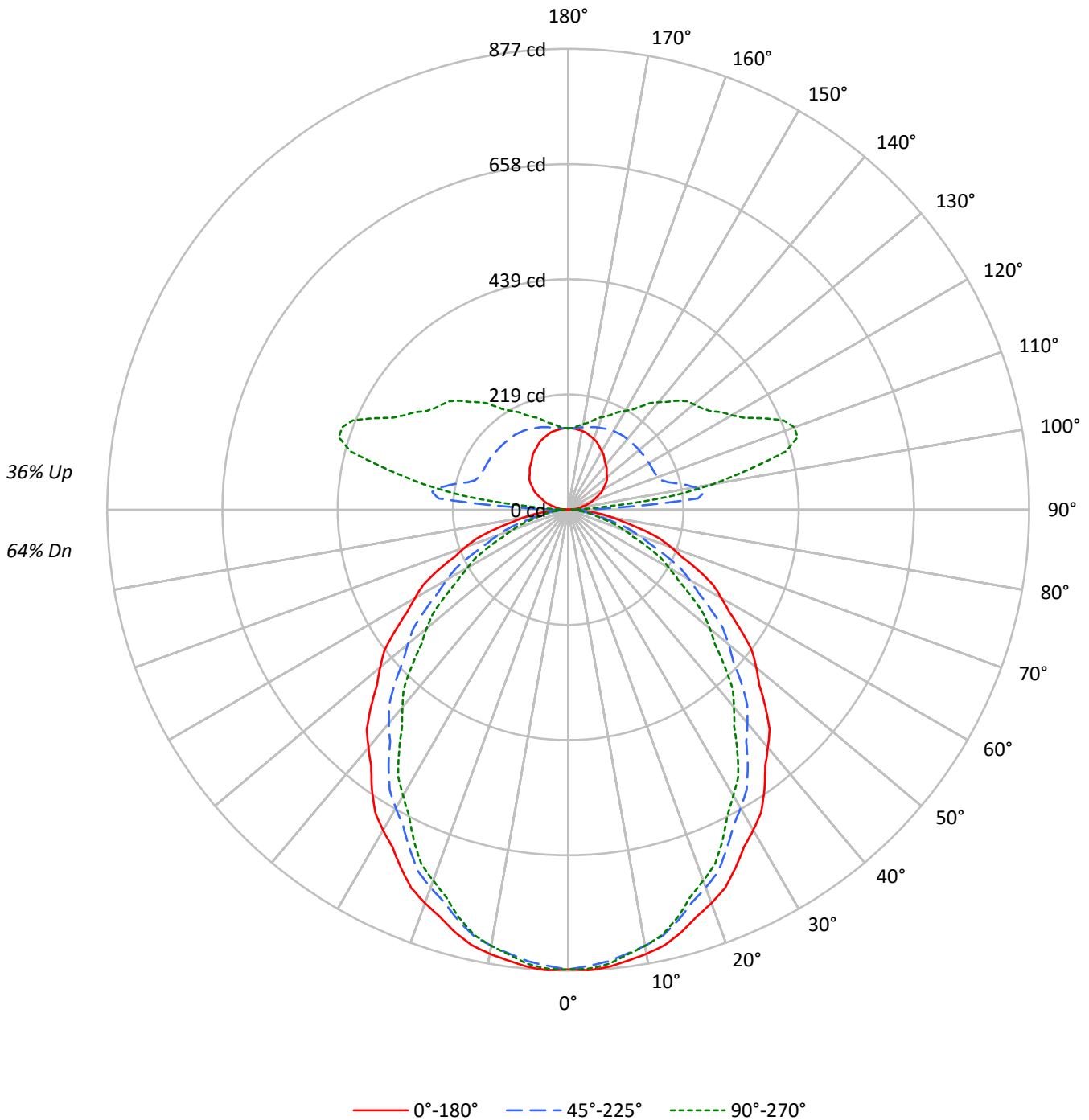
Input Watts (W): 27.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	111	111	111	111	104	104	104	104	91	91	91	80	80	80	69	69	69
1	101	97	93	90	95	91	88	85	81	78	76	71	69	67	62	60	59
2	93	85	79	74	87	80	75	70	71	67	63	63	59	57	55	52	50
3	85	75	68	62	79	71	64	59	63	58	54	56	52	48	49	46	43
4	78	67	59	53	73	63	56	51	56	51	46	50	45	42	44	40	38
5	71	60	52	46	67	57	49	44	51	45	40	45	40	36	40	36	33
6	66	54	46	40	62	51	44	38	46	40	35	41	36	32	36	32	29
7	61	49	41	35	57	46	39	34	42	36	31	37	32	29	33	29	26
8	57	44	37	31	53	42	35	30	38	32	28	34	29	26	30	26	23
9	53	41	33	28	50	39	32	27	35	29	25	31	27	23	28	24	21
10	50	37	30	25	47	36	29	24	32	27	23	29	24	21	26	22	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7064	7064	7064
5°	7080	6994	7037
10°	7035	6909	6909
15°	6955	6764	6714
20°	6844	6574	6453
25°	6702	6350	6188
30°	6564	6114	5858
35°	6412	5870	5527
40°	6227	5592	5168
45°	6058	5316	4804
50°	5865	4999	4417
55°	5658	4669	3997
60°	5430	4306	3570
65°	5223	3851	3148
70°	4919	3354	2672
75°	4535	2779	2174
80°	3956	2115	1994
85°	3353	1927	1806



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.2	2.6
10°-20°	229.2	7.3
20°-30°	331.0	10.5
30°-40°	375.2	11.9
40°-50°	362.3	11.5
50°-60°	301.3	9.6
60°-70°	208.0	6.6
70°-80°	105.4	3.3
80°-90°	27.9	0.9
90°-100°	111.9	3.6
100°-110°	232.8	7.4
110°-120°	208.5	6.6
120°-130°	175.4	5.6
130°-140°	146.3	4.6
140°-150°	111.7	3.5
150°-160°	78.5	2.5
160°-170°	46.2	1.5
170°-180°	15.0	0.5
0°-30°	642.4	20.4
0°-40°	1017.6	32.3
0°-60°	1681.1	53.4
0°-90°	2022.5	64.2
90°-120°	553.3	17.6
90°-150°	986.7	31.3
90°-180°	1126.0	35.8
0°-180°	3149.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	875	875	875	875	875	
5°	874	871	863	869	868	83
15°	832	825	809	808	803	234
25°	752	740	713	702	695	347
35°	651	628	596	573	561	406
45°	531	505	466	434	421	409
55°	402	374	332	298	284	359
65°	273	244	202	174	165	270
75°	145	120	89	74	70	154
85°	36	23	21	20	20	41
90°	0	2	6	6	6	2
95°	10	32	248	123	74	11
105°	36	52	200	430	428	38
115°	63	79	178	342	411	62
125°	87	104	177	291	328	78
135°	104	124	176	258	293	80
145°	120	137	175	218	239	75
155°	136	147	170	192	200	63
165°	148	153	163	172	175	42
175°	154	155	156	158	158	15
180°	155	155	155	155	155	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0
2.5°	877.2	876.7	876.2	875.7	875.3	874.3	873.1	871.8	870.4	869.1	870.4
5°	873.7	873.1	872.5	871.8	871.3	870.1	868.3	866.5	864.7	863.0	864.4
7.5°	865.7	865.1	864.5	863.9	863.2	861.8	859.5	857.1	854.8	852.5	853.4
10°	858.2	857.6	856.8	856.0	855.3	853.6	850.9	848.2	845.5	842.8	843.4
12.5°	848.6	847.7	846.9	846.0	845.2	843.2	840.0	836.8	833.7	830.5	830.9
15°	832.2	830.8	829.5	828.1	826.7	824.2	820.5	816.8	813.0	809.3	809.1
17.5°	812.2	810.2	808.3	806.3	804.4	801.2	796.8	792.3	787.8	783.3	782.6
20°	796.6	794.7	792.7	790.8	788.8	785.4	780.3	775.2	770.2	765.2	764.0
22.5°	779.5	777.3	775.2	772.9	770.8	767.0	761.6	756.1	750.7	745.3	743.5
25°	752.4	749.8	747.0	744.3	741.7	737.3	731.2	725.0	718.9	712.9	710.3
27.5°	724.0	720.7	717.3	713.9	710.5	705.6	699.0	692.6	686.0	679.5	676.4
30°	704.1	700.4	696.7	693.0	689.3	683.9	676.9	669.9	662.9	655.9	652.2
32.5°	683.3	679.1	674.9	670.6	666.5	660.7	653.5	646.3	639.0	631.8	627.5
35°	650.6	645.8	641.0	636.3	631.5	625.4	617.9	610.5	603.0	595.6	590.6
37.5°	615.6	610.7	605.8	600.9	595.9	589.4	581.1	572.8	564.6	556.4	550.7
40°	590.9	586.0	581.1	576.2	571.3	564.6	556.1	547.6	539.2	530.6	524.3
42.5°	567.3	562.2	557.1	551.9	546.7	539.8	530.9	522.0	513.2	504.4	498.0
45°	530.6	525.1	519.6	514.1	508.6	501.4	492.4	483.5	474.6	465.6	458.3
47.5°	492.8	487.1	481.3	475.6	469.9	462.4	453.1	443.9	434.6	425.3	417.8
50°	467.0	461.2	455.4	449.5	443.8	436.1	426.5	417.1	407.5	398.0	390.5
52.5°	440.7	435.1	429.4	423.7	417.9	410.3	400.5	390.7	380.9	371.2	363.6
55°	402.0	396.1	390.1	384.1	378.2	370.3	360.7	351.0	341.3	331.7	323.9
57.5°	363.7	357.5	351.3	345.1	338.9	331.1	321.5	311.9	302.5	292.9	285.1
60°	336.3	330.4	324.4	318.5	312.5	304.8	295.2	285.7	276.2	266.7	258.9
62.5°	311.7	305.5	299.3	293.1	286.9	279.0	269.1	259.4	249.6	239.9	232.7
65°	273.4	267.0	260.5	254.2	247.7	239.8	230.2	220.8	211.2	201.6	195.3
67.5°	233.6	227.4	221.3	215.2	209.1	201.6	192.7	183.8	175.0	166.2	160.7
70°	208.4	202.1	195.9	189.6	183.4	176.0	167.5	159.0	150.5	142.1	137.2
72.5°	181.6	175.9	170.2	164.6	158.9	152.1	144.1	136.1	128.0	120.0	115.9
75°	145.4	139.9	134.4	128.9	123.4	117.1	110.1	103.1	96.1	89.1	85.7
77.5°	108.7	104.0	99.4	94.6	90.0	84.8	79.1	73.5	67.8	62.2	60.2
80°	85.1	80.8	76.5	72.2	67.8	63.5	59.0	54.5	50.0	45.5	45.1
82.5°	64.7	60.8	56.8	52.9	48.9	45.6	43.0	40.5	38.0	35.4	35.0
85°	36.2	33.2	30.2	27.2	24.3	22.6	22.1	21.7	21.2	20.8	20.5
87.5°	12.4	11.5	10.8	9.9	9.0	8.4	8.7	8.6	8.6	8.6	8.4
90°	0.3	0.9	1.8	2.2	2.4	2.4	4.2	4.2	4.9	5.5	5.2
92.5°	3.4	5.1	7.9	11.6	16.1	22.4	37.9	61.5	84.5	96.5	80.4
95°	10.1	10.9	14.0	18.0	25.2	38.1	64.5	114.4	187.2	248.0	255.0
97.5°	18.0	18.0	20.7	24.3	30.6	41.2	61.6	102.9	175.1	261.2	320.4
100°	23.2	23.2	25.2	28.9	34.7	44.4	62.4	96.8	158.9	244.7	322.5
102.5°	28.0	28.5	30.4	33.8	39.3	48.6	64.8	95.1	147.9	223.9	304.3
105°	35.6	36.5	38.1	41.7	47.2	56.0	70.6	95.8	138.4	199.6	271.1
107.5°	44.0	44.6	46.1	50.0	55.3	64.0	77.3	100.4	136.7	186.0	244.4
110°	49.6	50.2	51.7	55.4	60.9	69.1	82.5	103.8	137.2	181.3	231.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	54.9	55.5	57.3	60.7	66.2	74.4	87.3	107.5	138.7	179.2	223.4
115°	62.7	63.6	65.7	68.8	74.6	82.7	95.0	113.2	141.5	178.1	216.4
117.5°	70.7	71.5	73.4	76.8	82.2	90.7	102.3	119.1	144.5	177.7	213.2
120°	76.1	76.7	78.8	82.1	87.3	95.8	107.5	123.2	146.7	177.7	211.5
122.5°	80.9	81.5	83.7	86.8	92.5	100.7	112.3	127.2	148.9	177.5	209.6
125°	87.3	88.5	90.4	93.8	99.5	108.1	119.0	132.9	152.1	177.1	206.3
127.5°	93.0	93.9	96.2	100.0	106.0	114.6	125.2	138.0	154.8	176.4	202.0
130°	96.2	97.4	99.8	104.4	110.1	119.0	129.3	141.2	156.7	176.2	199.3
132.5°	99.4	100.3	103.5	107.8	114.1	122.3	132.8	144.4	158.4	176.0	196.9
135°	103.8	105.0	108.1	113.2	119.6	127.5	137.5	148.5	161.0	175.6	193.2
137.5°	108.2	109.3	112.7	117.6	124.2	131.8	141.2	151.4	162.5	175.6	190.1
140°	111.4	112.3	115.6	120.8	127.2	134.5	143.6	153.3	163.7	175.3	188.4
142.5°	114.8	115.7	118.8	123.7	129.8	136.9	145.9	154.8	164.7	175.3	186.9
145°	119.6	120.5	123.6	127.8	133.6	140.3	148.2	156.4	165.2	174.7	184.4
147.5°	125.0	125.3	128.0	132.3	137.2	143.2	150.6	157.8	165.6	173.6	182.2
150°	128.4	128.7	131.1	134.8	139.4	145.2	151.9	158.5	165.6	172.8	180.5
152.5°	131.6	131.6	134.1	137.5	141.5	146.9	152.8	159.0	165.1	171.6	178.5
155°	136.0	136.3	138.2	141.2	144.6	149.1	154.3	159.5	164.4	169.8	175.6
157.5°	140.3	140.3	142.1	144.4	147.3	150.9	155.3	159.5	163.5	167.9	172.6
160°	143.0	143.0	144.2	146.4	148.8	152.1	155.8	159.5	162.8	166.4	170.4
162.5°	145.4	145.3	146.2	148.1	150.2	152.9	156.3	159.5	162.0	165.0	168.5
165°	148.2	148.2	148.8	150.3	151.9	153.7	156.4	158.9	160.7	162.8	165.2
167.5°	150.9	150.6	150.9	152.1	152.9	154.4	156.4	158.1	159.2	160.6	162.3
170°	152.1	151.9	152.1	153.1	153.7	154.5	156.1	157.6	158.3	159.1	160.4
172.5°	153.3	153.1	153.1	153.8	154.1	154.8	155.8	157.1	157.3	157.6	158.7
175°	154.5	154.3	154.3	154.5	154.9	154.9	155.5	156.4	156.1	156.1	156.7
177.5°	155.2	154.9	154.6	154.9	154.9	154.9	155.2	155.6	155.2	155.2	155.4
180°	154.9	154.9	154.9	154.9	154.9	154.9	154.9	154.9	154.9	154.9	154.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0
2.5°	871.8	873.1	874.3	874.9	874.9	874.7	874.6	874.5
5°	865.9	867.5	868.9	869.5	869.2	868.9	868.6	868.3
7.5°	854.4	855.3	856.4	856.5	856.1	855.6	855.1	854.6
10°	844.0	844.6	845.2	845.2	844.6	844.0	843.4	842.8
12.5°	831.2	831.6	832.0	831.7	830.9	830.1	829.2	828.4
15°	808.7	808.5	808.1	807.5	806.4	805.4	804.3	803.3
17.5°	781.7	780.8	780.0	778.8	777.2	775.7	774.0	772.5
20°	762.8	761.6	760.3	758.8	756.9	754.9	753.0	751.1
22.5°	741.8	739.9	738.1	736.5	734.9	733.3	731.8	730.1
25°	707.8	705.2	702.7	700.8	699.2	697.8	696.3	694.7
27.5°	673.2	670.1	667.0	664.3	662.2	660.0	658.0	655.8
30°	648.5	644.7	641.0	638.0	635.6	633.2	630.9	628.4
32.5°	623.2	618.9	614.5	611.2	609.0	606.7	604.4	602.2
35°	585.5	580.4	575.4	571.5	568.9	566.1	563.4	560.8
37.5°	545.0	539.4	533.7	529.6	526.8	524.2	521.5	518.8
40°	518.1	511.9	505.6	501.2	498.4	495.8	493.1	490.4
42.5°	491.6	485.3	478.9	474.3	471.5	468.7	465.9	463.1
45°	451.1	443.8	436.4	431.4	428.8	426.1	423.4	420.8
47.5°	410.2	402.6	395.0	389.8	386.8	383.9	381.0	378.0
50°	383.1	375.7	368.2	363.1	360.2	357.4	354.6	351.7
52.5°	356.0	348.4	341.0	335.7	332.7	329.8	326.8	323.9
55°	316.2	308.4	300.7	295.4	292.6	289.7	286.9	284.0
57.5°	277.2	269.3	261.5	256.5	254.3	252.2	250.0	247.9
60°	251.2	243.4	235.7	230.7	228.3	225.8	223.5	221.1
62.5°	225.6	218.4	211.3	206.7	204.8	202.9	201.0	199.1
65°	188.9	182.4	176.1	171.9	170.2	168.4	166.6	164.8
67.5°	155.2	149.6	144.1	140.4	138.4	136.5	134.5	132.5
70°	132.2	127.3	122.3	119.2	117.7	116.2	114.7	113.2
72.5°	111.7	107.5	103.2	100.5	99.1	97.7	96.3	95.0
75°	82.2	78.9	75.4	73.3	72.3	71.5	70.6	69.7
77.5°	58.2	56.2	54.2	53.0	52.8	52.5	52.3	52.0
80°	44.7	44.3	43.7	43.5	43.3	43.1	43.0	42.9
82.5°	34.7	34.4	34.1	33.8	33.7	33.5	33.4	33.2
85°	20.1	19.9	19.5	19.5	19.5	19.5	19.5	19.5
87.5°	8.4	8.3	8.3	8.3	8.4	8.6	8.7	8.8
90°	5.5	5.8	6.1	6.1	6.4	6.7	6.4	6.4
92.5°	59.8	44.9	35.8	29.7	26.1	24.5	23.4	23.4
95°	225.5	178.3	137.5	108.1	93.1	83.7	78.2	74.2
97.5°	333.1	315.6	285.9	254.1	232.2	214.0	204.8	198.5
100°	367.0	373.1	358.2	335.6	309.2	290.6	281.5	279.1
102.5°	365.3	395.5	399.8	390.4	374.2	360.8	351.1	349.1
105°	340.8	393.5	423.6	436.1	436.7	434.2	430.0	428.2
107.5°	306.1	362.1	404.5	431.7	446.7	453.7	456.7	457.4
110°	285.2	337.8	381.9	415.3	437.0	449.8	455.2	458.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	269.8	316.3	358.0	391.5	416.0	431.5	439.2	443.6
115°	254.4	291.8	327.4	356.6	380.6	398.9	408.7	411.1
117.5°	246.8	277.8	305.8	330.6	351.1	366.4	376.3	378.2
120°	243.4	271.7	296.1	317.7	335.0	348.4	356.4	359.7
122.5°	240.5	267.9	290.0	308.9	323.6	335.0	341.7	345.1
125°	235.6	261.7	282.7	299.5	311.6	320.5	326.2	328.0
127.5°	229.5	254.4	275.4	291.3	303.5	311.3	316.2	318.1
130°	224.5	248.7	269.3	285.4	297.9	305.5	310.4	312.2
132.5°	219.5	242.0	262.3	278.4	290.6	299.2	303.8	305.7
135°	212.4	232.2	250.7	266.0	278.1	286.6	291.5	293.3
137.5°	206.0	222.7	238.4	252.1	263.6	271.9	276.0	278.1
140°	202.3	216.6	230.3	243.1	253.8	260.5	264.8	267.2
142.5°	199.0	211.5	223.3	234.4	243.8	250.0	253.8	255.5
145°	194.2	204.5	213.6	222.1	229.7	234.9	238.0	239.4
147.5°	190.2	198.4	205.7	212.4	218.0	222.5	224.7	225.3
150°	187.8	194.8	200.9	206.3	211.2	215.2	217.0	217.2
152.5°	185.1	191.1	196.7	201.2	205.3	208.5	209.7	210.0
155°	181.1	185.9	190.5	194.2	197.2	199.6	200.5	200.5
157.5°	176.8	180.8	184.7	187.6	189.9	191.7	192.3	192.3
160°	174.1	177.4	180.7	183.2	185.0	186.8	187.2	187.2
162.5°	171.4	174.3	176.8	179.1	180.4	182.2	182.5	182.3
165°	167.6	169.5	171.6	173.1	174.4	175.6	175.3	175.0
167.5°	164.1	165.5	167.2	168.1	168.7	169.5	169.4	169.2
170°	161.9	162.8	164.0	165.0	165.6	165.8	165.6	165.6
172.5°	160.0	160.6	161.4	162.0	162.4	162.6	162.4	161.9
175°	157.3	157.6	158.3	158.3	158.3	158.9	158.3	157.6
177.5°	155.6	155.8	155.8	156.1	155.8	156.1	155.6	155.2
180°	154.9	154.9	154.9	154.9	154.9	154.9	154.9	154.9

(END OF REPORT)