

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: P332906-930

Luminaire Tested: **SA4XXRDIP-C575D590U930-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332906-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXRDIP-C575D590U930-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 590 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

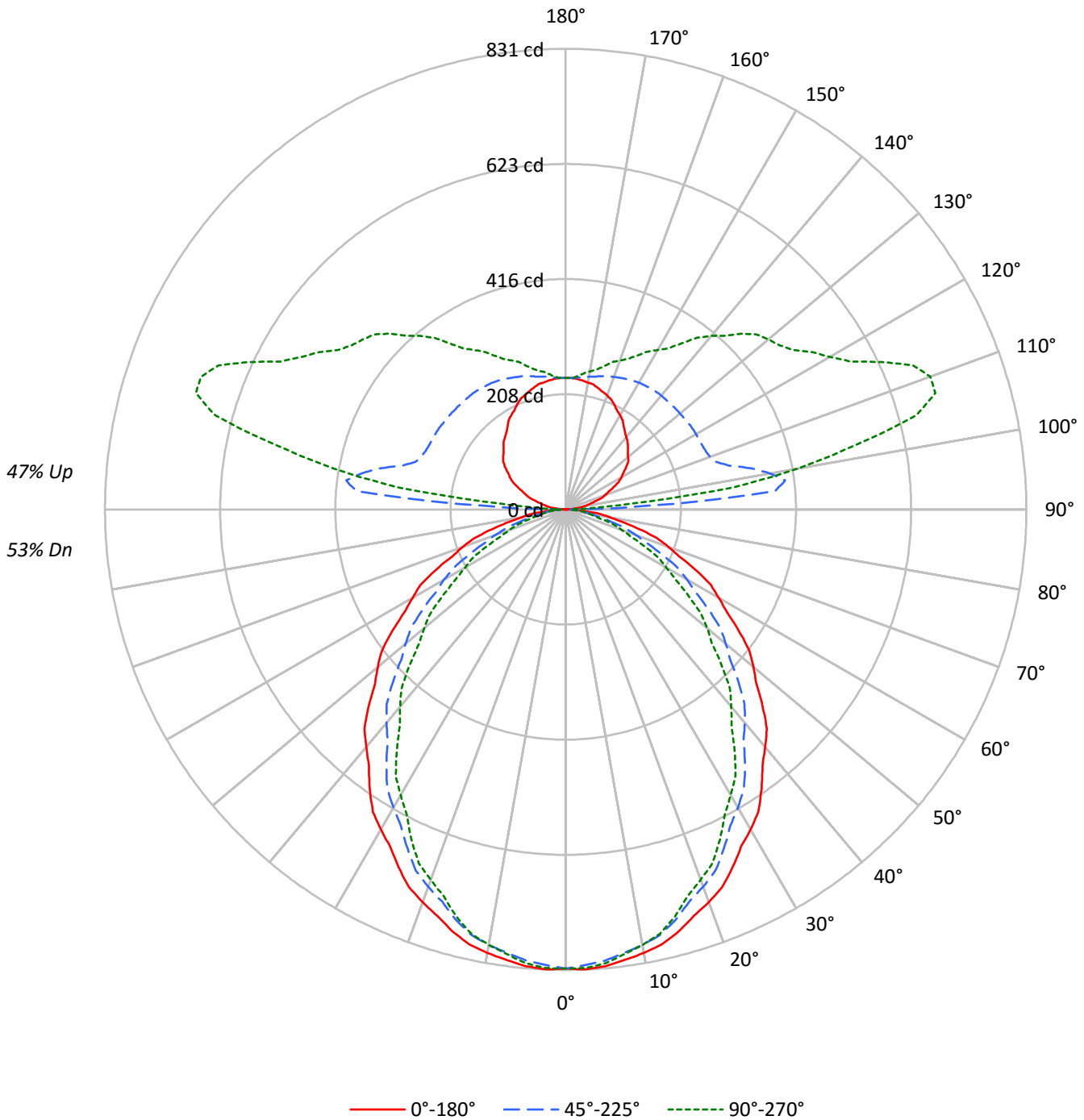
Lumens per Lamp: N/A
Luminaire Lumens: 3637.4 lumens
Efficiency: N/A
Efficacy: 110.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 32.8
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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	99	94	91	87	91	88	84	81	75	72	70	63	61	60	52	51	50	45
2	90	83	77	72	83	77	72	67	66	62	59	56	53	50	46	44	43	38
3	82	73	66	60	76	68	62	56	58	54	50	49	46	43	41	39	37	33
4	75	65	57	51	70	60	53	48	52	47	42	44	40	37	37	34	32	28
5	69	58	50	44	64	54	47	41	47	41	37	40	36	32	33	30	28	25
6	64	52	44	38	59	49	41	36	42	36	32	36	32	28	30	27	25	22
7	59	47	39	34	55	44	37	32	38	33	29	33	28	25	28	24	22	19
8	55	43	35	30	51	40	33	28	35	29	25	30	26	23	26	22	20	17
9	51	39	32	27	47	37	30	25	32	27	23	28	23	20	24	20	18	16
10	48	36	29	24	44	34	27	23	30	24	21	26	21	18	22	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6689	6689	6689
5°	6704	6622	6663
10°	6662	6542	6542
15°	6586	6405	6358
20°	6480	6225	6110
25°	6347	6013	5860
30°	6216	5790	5547
35°	6071	5558	5233
40°	5896	5296	4894
45°	5737	5034	4548
50°	5554	4732	4182
55°	5358	4421	3786
60°	5142	4077	3381
65°	4946	3647	2980
70°	4657	3175	2530
75°	4295	2633	2059
80°	3747	2004	1888
85°	3168	1815	1704



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.8	2.1
10°-20°	217.0	6.0
20°-30°	313.4	8.6
30°-40°	355.3	9.8
40°-50°	343.1	9.4
50°-60°	285.3	7.8
60°-70°	197.0	5.4
70°-80°	99.8	2.7
80°-90°	26.9	0.7
90°-100°	171.0	4.7
100°-110°	355.9	9.8
110°-120°	318.7	8.8
120°-130°	268.1	7.4
130°-140°	223.6	6.1
140°-150°	170.8	4.7
150°-160°	120.0	3.3
160°-170°	70.6	1.9
170°-180°	23.0	0.6
0°-30°	608.3	16.7
0°-40°	963.6	26.5
0°-60°	1591.9	43.8
0°-90°	1915.6	52.7
90°-120°	845.6	23.2
90°-150°	1508.1	41.5
90°-180°	1722.0	47.3
0°-180°	3637.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	829	829	829	829	829	
5°	827	824	817	823	822	78
15°	788	782	766	765	761	222
25°	712	700	675	664	658	328
35°	616	595	564	543	531	385
45°	502	478	441	411	398	387
55°	381	354	314	282	269	340
65°	259	231	191	165	156	256
75°	138	114	84	70	66	145
85°	34	22	20	18	18	39
90°	0	4	8	9	10	2
95°	15	48	379	188	114	17
105°	54	79	305	657	654	58
115°	96	120	272	523	628	95
125°	134	159	271	445	501	119
135°	159	189	268	395	448	123
145°	183	209	267	333	366	115
155°	208	224	260	294	306	96
165°	226	234	249	263	267	64
175°	236	237	239	242	241	22
180°	237	237	237	237	237	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6
2.5°	830.6	830.1	829.7	829.2	828.8	827.9	826.7	825.5	824.2	823.0	824.2
5°	827.3	826.7	826.1	825.6	825.1	823.9	822.2	820.5	818.8	817.2	818.6
7.5°	819.8	819.2	818.6	818.1	817.4	816.0	813.8	811.6	809.4	807.2	808.1
10°	812.7	812.0	811.3	810.6	809.9	808.3	805.8	803.2	800.6	798.1	798.7
12.5°	803.6	802.7	801.9	801.1	800.3	798.4	795.4	792.4	789.5	786.4	786.8
15°	788.0	786.7	785.5	784.2	782.9	780.5	777.0	773.5	769.9	766.4	766.1
17.5°	769.1	767.2	765.4	763.5	761.7	758.7	754.5	750.2	746.0	741.8	741.0
20°	754.3	752.5	750.6	748.9	747.0	743.7	738.9	734.1	729.3	724.6	723.4
22.5°	738.1	736.1	734.0	731.9	729.9	726.3	721.1	716.0	710.9	705.7	704.0
25°	712.5	710.0	707.4	704.8	702.3	698.1	692.4	686.6	680.8	675.1	672.6
27.5°	685.6	682.4	679.2	676.0	672.8	668.1	661.9	655.8	649.6	643.4	640.5
30°	666.8	663.2	659.7	656.2	652.7	647.6	641.0	634.4	627.7	621.1	617.6
32.5°	647.0	643.0	639.0	635.0	631.1	625.7	618.8	612.0	605.1	598.3	594.2
35°	616.0	611.6	607.0	602.5	598.0	592.2	585.1	578.1	571.0	564.0	559.2
37.5°	582.9	578.3	573.6	569.0	564.3	558.1	550.2	542.4	534.7	526.8	521.5
40°	559.5	554.9	550.2	545.6	541.0	534.6	526.6	518.5	510.5	502.5	496.5
42.5°	537.2	532.4	527.5	522.6	517.7	511.1	502.7	494.3	486.0	477.6	471.6
45°	502.5	497.3	492.0	486.8	481.6	474.7	466.3	457.9	449.4	440.9	434.0
47.5°	466.6	461.2	455.8	450.4	445.0	437.9	429.1	420.4	411.6	402.8	395.6
50°	442.2	436.7	431.2	425.7	420.2	412.9	403.9	394.9	385.9	376.8	369.8
52.5°	417.4	412.0	406.6	401.2	395.7	388.5	379.2	370.0	360.7	351.5	344.3
55°	380.7	375.0	369.4	363.7	358.1	350.7	341.5	332.4	323.2	314.1	306.7
57.5°	344.4	338.5	332.6	326.8	320.9	313.5	304.4	295.4	286.4	277.4	269.9
60°	318.5	312.8	307.2	301.6	296.0	288.6	279.6	270.5	261.5	252.5	245.2
62.5°	295.1	289.3	283.4	277.5	271.7	264.2	254.9	245.6	236.4	227.1	220.4
65°	258.9	252.8	246.7	240.7	234.6	227.1	218.0	209.0	200.0	190.9	184.9
67.5°	221.2	215.3	209.5	203.7	198.0	190.9	182.5	174.1	165.8	157.4	152.1
70°	197.3	191.4	185.5	179.5	173.7	166.6	158.6	150.6	142.5	134.5	129.9
72.5°	171.9	166.6	161.2	155.9	150.5	144.1	136.5	128.9	121.2	113.7	109.7
75°	137.7	132.5	127.3	122.1	116.8	110.9	104.3	97.6	91.0	84.4	81.1
77.5°	102.9	98.5	94.1	89.6	85.2	80.3	74.9	69.6	64.2	58.9	57.0
80°	80.6	76.5	72.4	68.3	64.2	60.1	55.8	51.6	47.4	43.1	42.7
82.5°	61.3	57.6	53.8	50.1	46.3	43.2	40.8	38.3	36.0	33.5	33.2
85°	34.2	31.5	28.6	25.8	23.0	21.4	21.0	20.5	20.1	19.6	19.4
87.5°	11.7	11.1	10.4	9.6	8.8	8.3	8.7	8.6	8.7	8.8	8.6
90°	0.5	1.4	2.8	3.3	3.8	3.8	6.5	6.5	7.4	8.4	7.9
92.5°	5.3	7.7	12.1	17.8	24.5	34.2	57.9	93.9	129.1	147.5	122.9
95°	15.3	16.7	21.4	27.5	38.6	58.1	98.6	174.9	286.0	379.0	389.7
97.5°	27.6	27.6	31.6	37.1	46.7	63.1	94.2	157.2	267.7	399.3	489.7
100°	35.4	35.4	38.6	44.2	53.0	67.9	95.3	147.9	242.8	373.9	493.0
102.5°	42.8	43.5	46.4	51.6	60.1	74.2	99.1	145.3	226.0	342.3	465.0
105°	54.4	55.8	58.1	63.8	72.1	85.6	107.9	146.5	211.7	305.1	414.4
107.5°	67.3	68.2	70.5	76.5	84.5	97.8	118.2	153.4	209.0	284.3	373.5
110°	75.8	76.7	79.1	84.6	93.0	105.6	126.0	158.6	209.8	277.2	353.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	84.0	85.0	87.6	92.9	101.2	113.7	133.5	164.2	212.0	273.9	341.4
115°	95.8	97.2	100.4	105.1	114.0	126.5	145.1	173.0	216.3	272.1	330.7
117.5°	108.1	109.4	112.3	117.4	125.6	138.7	156.4	182.1	220.8	271.6	325.9
120°	116.3	117.2	120.4	125.6	133.5	146.5	164.2	188.3	224.2	271.6	323.3
122.5°	123.7	124.7	127.9	132.6	141.3	153.9	171.6	194.3	227.6	271.3	320.2
125°	133.5	135.3	138.1	143.2	152.1	165.1	181.8	203.3	232.5	270.7	315.4
127.5°	142.1	143.7	147.0	152.8	162.0	175.1	191.4	211.0	236.5	269.6	308.8
130°	147.0	148.8	152.5	159.6	168.4	181.8	197.6	215.8	239.5	269.3	304.6
132.5°	151.8	153.3	158.2	164.8	174.3	187.0	202.8	220.6	242.1	268.9	300.9
135°	158.6	160.5	165.1	173.0	182.8	194.9	210.2	227.0	246.1	268.3	295.3
137.5°	165.4	167.1	172.3	179.8	190.0	201.5	215.8	231.5	248.3	268.2	290.5
140°	170.2	171.6	176.8	184.7	194.4	205.5	219.6	234.4	250.2	267.9	287.9
142.5°	175.5	176.8	181.6	189.1	198.5	209.3	222.9	236.6	251.7	267.9	285.7
145°	182.8	184.2	188.8	195.3	204.2	214.4	226.5	239.0	252.6	266.9	281.8
147.5°	191.0	191.5	195.6	202.3	209.7	218.9	230.2	241.2	253.0	265.3	278.4
150°	196.2	196.7	200.5	206.0	213.0	221.8	232.1	242.3	253.0	264.2	275.8
152.5°	201.1	201.2	204.9	210.1	216.4	224.5	233.6	243.0	252.3	262.3	272.8
155°	207.9	208.4	211.2	215.8	220.9	227.9	235.8	243.7	251.1	259.5	268.3
157.5°	214.5	214.5	217.1	220.7	225.2	230.6	237.4	243.7	250.0	256.7	263.8
160°	218.6	218.6	220.5	223.7	227.4	232.5	238.1	243.7	248.8	254.4	260.5
162.5°	222.3	221.9	223.4	226.3	229.7	233.7	238.9	243.7	247.7	252.2	257.5
165°	226.5	226.5	227.4	229.8	232.1	234.9	239.0	242.8	245.6	248.8	252.6
167.5°	230.6	230.2	230.6	232.4	233.7	235.9	239.0	241.7	243.4	245.5	248.1
170°	232.5	232.1	232.5	233.9	234.9	236.3	238.6	240.9	241.8	243.2	245.1
172.5°	234.4	233.9	234.0	235.1	235.6	236.6	238.2	240.2	240.4	241.0	242.5
175°	236.3	235.8	235.8	236.3	236.8	236.8	237.7	239.0	238.6	238.6	239.5
177.5°	237.1	236.8	236.4	236.8	236.8	236.8	237.1	237.8	237.1	237.1	237.5
180°	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6
2.5°	825.5	826.7	827.9	828.5	828.4	828.3	828.2	828.1
5°	819.9	821.4	822.8	823.4	823.0	822.8	822.5	822.2
7.5°	809.0	809.9	810.9	811.1	810.7	810.2	809.8	809.3
10°	799.2	799.8	800.4	800.4	799.8	799.2	798.7	798.1
12.5°	787.1	787.4	787.8	787.6	786.8	786.0	785.2	784.4
15°	765.8	765.6	765.2	764.7	763.6	762.6	761.7	760.7
17.5°	740.2	739.4	738.6	737.4	736.0	734.5	733.0	731.5
20°	722.3	721.1	720.0	718.5	716.7	714.9	713.1	711.2
22.5°	702.4	700.7	699.0	697.4	695.9	694.4	692.9	691.4
25°	670.3	667.8	665.4	663.6	662.1	660.7	659.3	657.9
27.5°	637.5	634.5	631.6	629.1	627.0	625.0	623.1	621.0
30°	614.1	610.5	607.0	604.1	601.9	599.6	597.4	595.1
32.5°	590.1	586.0	581.9	578.8	576.7	574.5	572.3	570.2
35°	554.4	549.6	544.9	541.2	538.7	536.1	533.5	531.0
37.5°	516.1	510.8	505.4	501.5	498.9	496.4	493.8	491.3
40°	490.6	484.7	478.7	474.6	472.0	469.4	466.9	464.4
42.5°	465.5	459.5	453.5	449.1	446.5	443.8	441.2	438.5
45°	427.1	420.2	413.3	408.5	406.0	403.5	401.0	398.4
47.5°	388.4	381.2	374.1	369.1	366.3	363.5	360.8	357.9
50°	362.7	355.7	348.6	343.8	341.1	338.4	335.7	333.0
52.5°	337.1	330.0	322.9	317.9	315.0	312.3	309.5	306.7
55°	299.4	292.0	284.7	279.7	277.0	274.3	271.7	269.0
57.5°	262.4	255.0	247.6	242.9	240.8	238.8	236.8	234.7
60°	237.8	230.5	223.1	218.4	216.1	213.9	211.7	209.4
62.5°	213.6	206.8	200.1	195.8	194.0	192.2	190.4	188.6
65°	178.9	172.8	166.7	162.8	161.2	159.5	157.8	156.0
67.5°	146.9	141.7	136.5	133.0	131.1	129.2	127.3	125.5
70°	125.2	120.6	115.9	112.8	111.5	110.1	108.6	107.2
72.5°	105.7	101.7	97.8	95.1	93.8	92.5	91.2	89.9
75°	77.9	74.7	71.4	69.4	68.5	67.7	66.9	66.0
77.5°	55.1	53.2	51.3	50.2	50.0	49.7	49.5	49.2
80°	42.3	41.9	41.4	41.2	41.0	40.8	40.8	40.6
82.5°	32.9	32.5	32.3	32.0	31.9	31.7	31.6	31.5
85°	19.1	18.8	18.5	18.4	18.4	18.4	18.4	18.4
87.5°	8.6	8.6	8.5	8.5	8.7	8.9	9.0	9.0
90°	8.4	8.8	9.3	9.3	9.8	10.2	9.8	9.8
92.5°	91.3	68.7	54.7	45.4	39.9	37.4	35.8	35.8
95°	344.6	272.6	210.2	165.1	142.4	127.9	119.5	113.5
97.5°	509.2	482.4	436.9	388.3	355.0	326.9	313.0	303.3
100°	560.9	570.2	547.4	513.0	472.5	444.2	430.2	426.5
102.5°	558.3	604.5	611.1	596.7	571.9	551.3	536.6	533.6
105°	520.9	601.4	647.4	666.5	667.4	663.7	657.1	654.4
107.5°	467.8	553.4	618.3	659.7	682.7	693.3	698.0	699.2
110°	435.8	516.2	583.7	634.9	667.9	687.4	695.8	699.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	412.4	483.5	547.2	598.3	635.9	659.5	671.2	678.0
115°	388.8	446.1	500.4	545.1	581.8	609.8	624.6	628.4
117.5°	377.2	424.6	467.4	505.2	536.6	560.0	575.1	578.0
120°	372.1	415.3	452.5	485.5	512.1	532.6	544.6	549.8
122.5°	367.6	409.4	443.2	472.1	494.6	512.1	522.3	527.4
125°	360.0	400.0	432.0	457.6	476.2	489.8	498.6	501.3
127.5°	350.7	388.9	420.9	445.2	463.9	475.9	483.3	486.1
130°	343.2	380.0	411.6	436.3	455.3	466.9	474.4	477.2
132.5°	335.4	369.9	400.8	425.4	444.2	457.3	464.3	467.2
135°	324.7	354.9	383.2	406.5	425.1	438.1	445.6	448.3
137.5°	314.9	340.5	364.4	385.4	402.8	415.6	421.8	425.1
140°	309.2	331.2	352.0	371.6	387.9	398.1	404.6	408.4
142.5°	304.1	323.3	341.3	358.2	372.6	382.1	387.9	390.4
145°	296.7	312.5	326.5	339.5	351.1	359.1	363.7	366.0
147.5°	290.7	303.2	314.4	324.7	333.2	340.0	343.5	344.4
150°	287.0	297.7	307.0	315.4	322.8	328.8	331.6	332.1
152.5°	282.8	292.0	300.6	307.5	313.8	318.8	320.4	320.9
155°	276.7	284.1	291.1	296.7	301.4	305.1	306.5	306.5
157.5°	270.1	276.4	282.2	286.7	290.2	293.0	293.8	293.8
160°	266.0	271.2	276.2	280.0	282.7	285.6	286.0	286.0
162.5°	262.0	266.3	270.3	273.7	275.7	278.5	279.0	278.6
165°	256.2	259.0	262.3	264.6	266.5	268.3	267.9	267.4
167.5°	250.8	252.9	255.5	256.9	257.9	259.0	258.9	258.6
170°	247.4	248.8	250.7	252.1	253.0	253.5	253.0	253.0
172.5°	244.4	245.5	246.6	247.6	248.2	248.7	248.2	247.4
175°	240.4	240.9	241.8	241.8	241.8	242.8	241.8	240.9
177.5°	237.8	238.2	238.2	238.6	238.2	238.6	237.8	237.1
180°	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8

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