

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: P331680-930

Luminaire Tested: **SA2XXRDIP-C675D330U930-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331680-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-C675D330U930-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 330 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

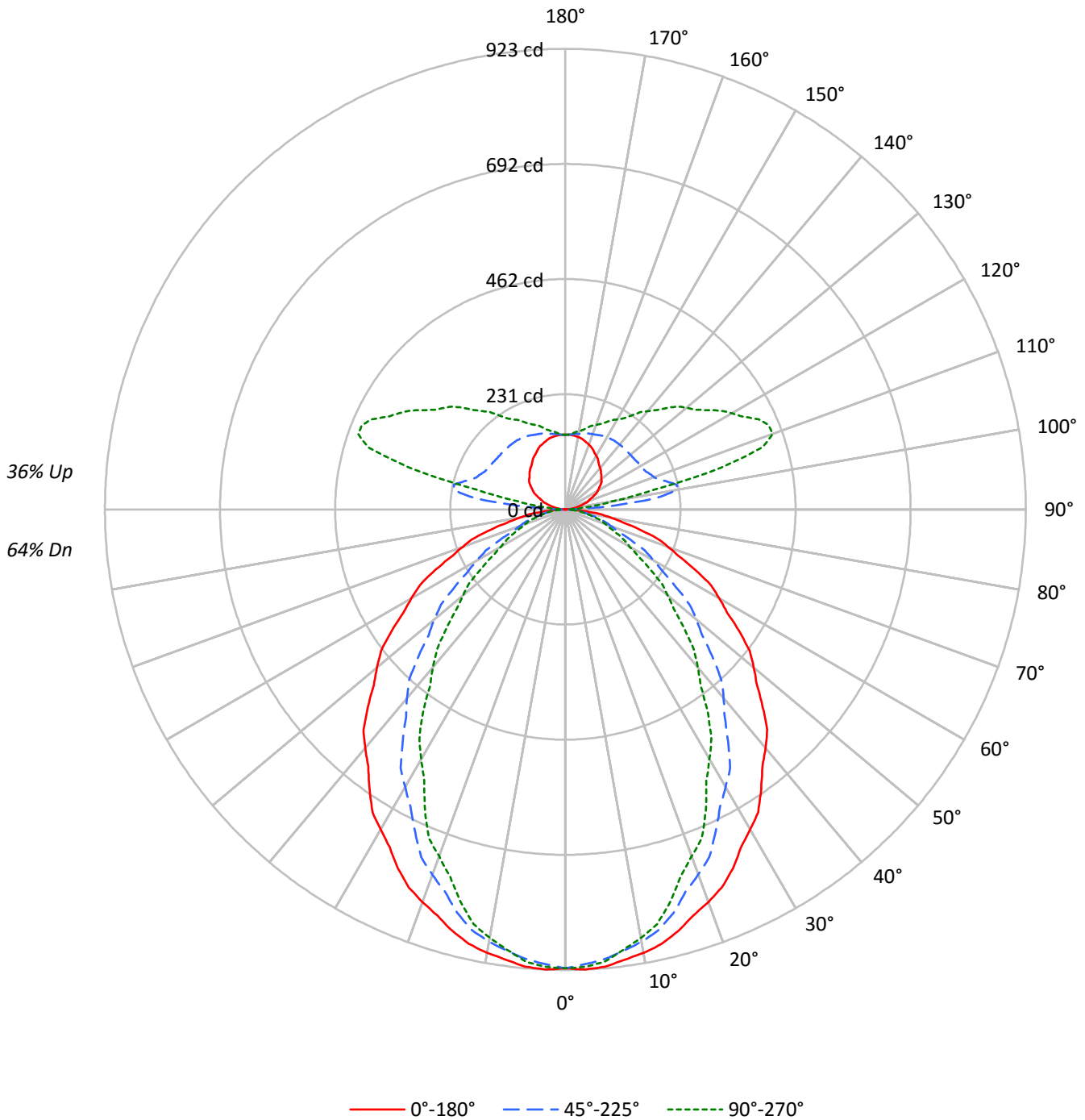
Lumens per Lamp: N/A
Luminaire Lumens: 2935.3 lumens
Efficiency: N/A
Efficacy: 83.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 35
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	0	
RCR																						
0	111	111	111	111	104	104	104	104	91	91	91	80	80	80	69	69	69	64				
1	102	97	94	90	95	92	88	86	81	79	76	71	70	68	62	61	60	56				
2	93	86	80	75	87	81	76	71	72	68	64	63	60	58	56	53	51	48				
3	85	76	69	63	80	72	65	60	64	59	55	57	53	50	50	47	44	41				
4	78	68	60	54	74	64	57	52	57	52	47	51	47	43	45	42	39	36				
5	72	61	53	47	68	58	50	45	52	46	41	46	41	38	41	37	34	31				
6	67	55	47	41	63	52	45	40	47	41	36	42	37	33	37	33	31	28				
7	62	50	42	36	58	47	40	35	43	37	32	38	34	30	34	30	27	25				
8	58	46	38	33	54	43	36	31	39	33	29	35	30	27	32	28	25	23				
9	54	42	34	29	51	40	33	28	36	30	26	33	28	24	29	25	23	21				
10	51	39	31	26	48	37	30	26	33	28	24	30	26	22	27	23	21	19				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14849	14849	14849
5°	14906	14663	14744
10°	14791	14423	14300
15°	14621	13996	13593
20°	14387	13385	12713
25°	14145	12691	11863
30°	13811	11979	10769
35°	13484	11203	9810
40°	13156	10404	8701
45°	12771	9501	7695
50°	12376	8593	6712
55°	11972	7614	5762
60°	11502	6584	4782
65°	10968	5532	4359
70°	10334	4556	4008
75°	9551	4155	3737
80°	8433	3710	3403
85°	6632	2927	2927



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.1	2.9
10°-20°	236.4	8.1
20°-30°	331.9	11.3
30°-40°	361.9	12.3
40°-50°	332.8	11.3
50°-60°	261.4	8.9
60°-70°	170.4	5.8
70°-80°	87.9	3.0
80°-90°	24.1	0.8
90°-100°	59.9	2.0
100°-110°	203.2	6.9
110°-120°	215.9	7.4
120°-130°	177.7	6.1
130°-140°	142.7	4.9
140°-150°	107.9	3.7
150°-160°	75.8	2.6
160°-170°	44.6	1.5
170°-180°	14.5	0.5
0°-30°	654.4	22.3
0°-40°	1016.3	34.6
0°-60°	1610.5	54.9
0°-90°	1892.9	64.5
90°-120°	479.1	16.3
90°-150°	907.4	30.9
90°-180°	1042.0	35.5
0°-180°	2935.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	920	920	920	920	920	
5°	920	915	905	912	910	87
15°	875	864	837	822	813	246
25°	794	766	712	680	666	365
35°	684	640	568	518	498	428
45°	559	502	416	359	337	432
55°	425	359	270	222	205	380
65°	287	219	145	118	114	285
75°	153	96	67	61	60	162
85°	36	19	16	16	16	42
90°	0	4	10	9	10	2
95°	10	25	113	43	33	11
105°	35	53	213	382	325	37
115°	62	78	179	369	427	61
125°	86	102	172	299	347	77
135°	101	121	170	251	287	78
145°	116	133	169	210	229	73
155°	132	142	164	185	193	61
165°	144	148	157	166	169	40
175°	150	150	151	153	152	14
180°	150	150	150	150	150	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	919.7	919.7	919.7	919.7	919.7	919.7	919.7	919.7	919.7	919.7	919.7
2.5°	923.0	922.3	921.5	920.8	920.1	918.8	917.2	915.6	914.0	912.4	913.9
5°	919.7	918.8	917.9	916.9	916.0	914.4	911.9	909.5	907.1	904.7	906.4
7.5°	910.2	909.1	907.9	906.8	905.6	903.6	900.8	898.1	895.2	892.4	892.8
10°	902.2	900.9	899.6	898.3	897.0	894.5	890.8	887.1	883.5	879.7	879.2
12.5°	892.2	890.6	889.0	887.5	885.8	882.7	878.0	873.3	868.5	863.7	862.7
15°	874.7	872.7	870.7	868.6	866.6	862.4	856.1	849.9	843.6	837.3	833.8
17.5°	853.3	850.2	847.1	843.9	840.8	835.3	827.2	819.1	811.1	803.0	798.8
20°	837.3	833.6	829.9	826.2	822.5	816.0	806.7	797.5	788.3	779.0	774.4
22.5°	819.9	815.9	811.7	807.6	803.4	796.1	785.7	775.3	764.8	754.4	748.4
25°	794.0	788.1	782.2	776.2	770.4	761.2	749.1	736.9	724.6	712.4	704.8
27.5°	762.7	756.3	749.8	743.4	736.9	726.8	713.1	699.4	685.6	671.8	663.0
30°	740.8	733.7	726.7	719.7	712.7	701.7	686.9	672.1	657.3	642.5	633.1
32.5°	719.4	711.2	703.0	694.8	686.6	674.9	659.8	644.7	629.7	614.6	603.8
35°	684.1	674.7	665.3	655.8	646.5	633.6	617.3	601.0	584.7	568.4	556.8
37.5°	648.9	638.5	628.1	617.8	607.4	593.5	576.3	558.9	541.5	524.2	511.4
40°	624.2	613.1	602.0	590.9	579.8	565.3	547.4	529.5	511.5	493.6	480.5
42.5°	598.9	587.3	575.5	563.9	552.2	537.0	518.5	500.0	481.4	462.9	449.3
45°	559.3	546.9	534.5	522.1	509.7	493.8	474.4	455.0	435.5	416.1	403.0
47.5°	520.7	507.5	494.4	481.3	468.1	451.6	431.5	411.5	391.4	371.4	358.3
50°	492.7	479.6	466.4	453.3	440.2	423.5	403.1	382.8	362.4	342.1	329.3
52.5°	465.5	451.7	438.0	424.3	410.5	393.7	373.8	353.9	334.0	314.1	301.8
55°	425.3	410.9	396.5	382.0	367.6	350.4	330.4	310.5	290.5	270.5	259.4
57.5°	384.2	369.4	354.6	339.8	325.0	308.0	288.8	269.6	250.4	231.2	221.0
60°	356.2	341.4	326.6	311.9	297.0	280.1	261.1	242.0	223.0	203.9	194.4
62.5°	328.9	314.1	299.3	284.5	269.7	253.2	235.1	217.0	198.8	180.6	171.6
65°	287.1	272.1	257.1	242.2	227.2	211.4	194.8	178.1	161.4	144.8	138.5
67.5°	246.9	232.0	217.1	202.3	187.4	172.4	157.4	142.5	127.5	112.5	109.7
70°	218.9	204.5	190.0	175.6	161.2	147.6	134.9	122.1	109.3	96.5	94.7
72.5°	192.2	178.4	164.6	150.7	136.9	124.9	114.6	104.4	94.2	83.9	82.3
75°	153.1	140.2	127.3	114.3	101.3	91.7	85.4	79.2	72.9	66.6	65.3
77.5°	114.7	103.3	92.0	80.6	69.3	62.0	59.0	56.0	53.0	50.0	49.2
80°	90.7	81.3	71.8	62.5	53.0	47.4	45.5	43.6	41.8	39.9	39.2
82.5°	68.7	61.4	54.1	46.6	39.3	35.0	33.8	32.4	31.2	30.0	29.5
85°	35.8	31.9	28.0	24.1	20.2	18.0	17.4	17.0	16.4	15.8	15.8
87.5°	10.7	9.7	8.7	7.7	6.6	6.2	6.4	6.8	7.3	7.3	7.1
90°	0.3	1.1	2.3	2.9	3.4	4.3	5.8	7.7	9.5	9.8	9.5
92.5°	3.5	5.1	7.2	8.4	10.4	13.0	19.6	28.8	36.9	37.4	31.6
95°	10.1	11.3	14.1	16.7	21.3	28.2	41.5	66.5	100.0	112.9	98.8
97.5°	16.4	17.9	21.0	24.9	30.2	38.1	54.7	89.7	145.2	192.7	202.2
100°	22.2	23.1	25.6	30.2	36.0	44.1	59.4	94.5	156.7	227.6	269.0
102.5°	27.5	28.1	30.7	35.3	41.3	49.4	63.5	94.7	152.3	228.7	293.9
105°	35.1	36.3	38.3	42.6	49.0	57.1	70.6	96.2	143.7	213.4	290.1
107.5°	43.5	44.4	46.3	50.3	56.6	64.7	77.9	100.2	139.5	197.1	264.8
110°	49.0	50.1	51.9	55.6	61.6	70.0	82.7	103.4	138.6	189.2	248.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	54.1	55.2	57.2	60.7	66.4	75.1	87.3	106.9	138.8	184.2	237.8
115°	62.0	63.3	65.1	68.6	74.4	82.1	94.5	112.0	140.0	178.6	224.1
117.5°	70.1	71.3	73.0	76.1	81.6	89.7	101.1	117.6	142.1	175.9	215.5
120°	75.2	76.3	78.1	80.6	86.4	94.5	105.7	121.3	143.5	174.3	210.8
122.5°	80.1	81.0	82.7	85.5	91.2	99.5	110.1	124.5	145.0	173.3	206.9
125°	86.4	87.3	89.0	92.5	98.2	106.3	116.7	129.6	147.5	171.7	201.4
127.5°	91.5	92.6	95.1	98.9	104.4	112.7	122.8	134.4	149.9	170.7	196.2
130°	94.5	95.6	98.5	102.6	108.4	116.3	126.5	137.4	151.8	170.2	192.7
132.5°	97.3	98.7	101.7	106.0	112.0	120.1	129.7	140.4	153.7	170.0	190.0
135°	101.4	102.6	106.0	110.3	117.0	125.0	134.3	144.3	155.9	169.7	186.1
137.5°	105.3	106.7	110.1	114.8	121.3	128.8	137.9	147.3	157.8	169.6	183.4
140°	108.4	109.5	112.9	117.6	123.8	131.3	140.0	149.0	158.7	169.4	181.7
142.5°	111.3	112.3	115.4	120.1	126.2	133.2	141.6	150.3	159.4	169.4	180.2
145°	115.8	117.0	119.8	124.2	130.0	136.2	144.1	152.1	160.1	168.8	178.1
147.5°	120.7	121.5	124.3	128.2	133.1	138.7	146.0	153.1	160.4	167.8	175.9
150°	123.8	124.7	127.0	130.8	135.1	140.3	146.9	153.5	160.1	167.1	174.0
152.5°	127.1	127.5	129.8	133.1	137.2	141.9	147.8	153.8	159.7	165.9	172.4
155°	131.7	131.9	133.6	136.8	140.0	144.3	149.2	154.1	159.0	163.9	169.4
157.5°	135.4	135.7	137.1	139.9	142.4	146.0	150.2	154.1	157.7	161.8	166.6
160°	137.9	138.3	139.4	141.7	144.1	147.2	150.7	154.1	157.0	160.5	164.4
162.5°	140.6	140.3	141.5	143.3	145.4	147.9	150.9	153.8	156.3	159.3	162.7
165°	143.5	143.2	143.7	145.4	146.9	148.6	151.2	153.3	155.0	157.0	159.6
167.5°	145.9	145.5	146.0	147.2	148.2	149.3	151.2	152.9	153.7	155.0	156.6
170°	147.5	146.9	147.2	148.1	148.6	149.5	150.9	152.4	153.0	153.8	155.0
172.5°	148.4	148.1	147.9	148.8	149.1	149.8	150.7	151.7	152.1	152.5	153.4
175°	149.5	149.2	149.0	149.5	149.5	149.8	150.3	150.9	150.7	150.9	151.2
177.5°	150.0	149.5	149.4	149.8	149.8	149.8	150.0	150.5	150.0	149.8	150.0
180°	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	919.7	919.7	919.7	919.7	919.7	919.7	919.7	919.7
2.5°	915.3	916.8	918.3	918.8	918.6	918.3	918.0	917.7
5°	908.0	909.7	911.3	911.9	911.3	910.8	910.3	909.7
7.5°	893.3	893.8	894.3	894.1	893.1	892.2	891.2	890.2
10°	878.6	878.1	877.5	876.7	875.5	874.5	873.3	872.2
12.5°	861.8	860.8	859.7	858.3	856.5	854.7	852.8	850.9
15°	830.3	826.7	823.2	820.5	818.7	816.8	815.0	813.2
17.5°	794.7	790.4	786.3	782.6	779.4	776.2	773.1	769.9
20°	769.8	765.2	760.5	756.2	752.1	748.0	744.0	739.9
22.5°	742.5	736.5	730.6	726.1	723.0	720.0	717.0	714.0
25°	697.2	689.7	682.1	676.9	674.2	671.4	668.6	665.9
27.5°	654.1	645.3	636.5	629.8	625.4	621.0	616.6	612.2
30°	623.7	614.2	604.8	597.6	592.6	587.6	582.6	577.6
32.5°	593.0	582.3	571.5	563.8	559.1	554.4	549.7	545.0
35°	545.2	533.5	521.9	514.0	509.9	505.8	501.8	497.7
37.5°	498.5	485.7	472.9	464.1	459.4	454.8	450.1	445.5
40°	467.2	454.1	441.0	432.0	427.2	422.4	417.6	412.8
42.5°	435.8	422.2	408.6	399.5	394.8	390.2	385.6	380.8
45°	389.9	376.7	363.6	354.8	350.4	345.9	341.5	337.0
47.5°	345.3	332.2	319.1	310.6	306.6	302.6	298.5	294.5
50°	316.6	303.8	291.1	282.7	278.8	274.9	271.1	267.2
52.5°	289.5	277.1	264.8	256.9	253.3	249.7	246.1	242.6
55°	248.3	237.2	226.1	218.8	215.3	211.7	208.2	204.7
57.5°	210.8	200.7	190.5	183.9	181.0	178.1	175.0	172.1
60°	185.1	175.6	166.2	160.0	157.0	154.1	151.1	148.1
62.5°	162.7	153.6	144.6	139.3	137.5	135.7	134.0	132.2
65°	132.2	126.0	119.7	116.3	115.7	115.1	114.5	114.1
67.5°	106.7	103.9	101.0	99.2	98.7	98.1	97.5	96.9
70°	92.9	91.0	89.1	87.9	87.1	86.3	85.6	84.9
72.5°	80.8	79.2	77.7	76.7	76.2	75.8	75.3	74.9
75°	64.0	62.7	61.4	60.7	60.5	60.3	60.1	59.9
77.5°	48.4	47.7	47.0	46.5	46.1	45.9	45.6	45.2
80°	38.5	37.7	37.0	36.6	36.6	36.6	36.6	36.6
82.5°	29.1	28.6	28.2	28.0	28.0	28.0	28.0	28.0
85°	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
87.5°	6.8	6.6	6.6	6.5	6.5	6.5	6.5	6.5
90°	9.2	8.6	9.2	9.5	9.5	9.5	9.5	9.5
92.5°	25.1	21.5	19.2	17.4	17.1	16.2	16.4	16.0
95°	75.5	57.9	45.8	39.5	35.7	33.4	32.5	32.9
97.5°	176.1	144.1	112.9	92.1	78.4	71.3	67.1	64.7
100°	263.0	227.3	187.8	153.0	129.1	116.7	108.4	103.1
102.5°	319.9	311.9	283.0	246.1	220.0	198.9	188.5	181.5
105°	350.0	382.5	386.3	376.8	358.9	341.0	328.6	324.7
107.5°	328.3	377.4	407.3	421.3	423.5	422.6	420.0	414.7
110°	309.7	361.3	398.1	421.8	434.1	439.6	442.2	441.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	292.6	342.1	381.5	408.6	425.8	435.0	439.9	441.4
115°	271.7	316.0	353.8	383.4	403.9	417.1	424.6	427.2
117.5°	255.8	294.8	329.1	356.9	377.7	391.8	399.6	401.8
120°	248.0	283.7	314.3	340.5	360.7	374.2	382.5	385.5
122.5°	241.8	274.5	303.5	327.1	345.2	358.6	366.0	368.4
125°	232.8	262.4	287.8	309.4	326.1	337.0	344.2	346.6
127.5°	223.8	250.7	274.6	294.5	309.1	319.4	325.5	327.4
130°	218.1	242.9	265.6	284.6	298.7	308.5	314.3	316.6
132.5°	212.5	235.5	256.4	274.3	288.1	297.9	303.2	305.3
135°	204.8	223.8	242.9	258.9	271.3	280.9	286.1	287.2
137.5°	198.7	214.6	229.7	243.7	255.0	263.2	267.7	269.5
140°	194.7	208.6	221.8	234.5	243.7	251.2	255.5	257.2
142.5°	191.5	203.3	214.7	225.3	234.0	240.8	244.7	245.0
145°	186.9	196.5	205.4	213.8	220.6	225.6	228.4	229.3
147.5°	183.4	190.9	197.9	204.0	209.7	213.6	215.6	216.1
150°	180.9	187.3	193.3	198.4	202.8	206.3	208.0	208.3
152.5°	178.4	184.3	189.4	193.9	197.3	200.2	201.5	201.6
155°	174.9	179.4	183.8	186.9	190.1	192.2	193.3	192.7
157.5°	170.8	174.6	178.2	180.8	183.0	184.7	185.2	185.2
160°	168.2	171.4	174.6	176.6	178.6	180.0	180.3	180.3
162.5°	165.7	168.4	171.1	172.7	174.7	175.7	175.9	175.7
165°	161.9	163.9	165.9	167.1	168.2	169.4	169.4	169.1
167.5°	158.2	159.8	161.2	162.2	162.7	163.4	163.3	163.0
170°	156.5	157.3	158.4	159.0	159.3	160.1	159.9	159.3
172.5°	154.3	155.0	155.9	156.2	156.5	156.9	156.6	156.3
175°	152.1	152.4	152.7	153.0	153.0	153.3	153.0	152.4
177.5°	150.5	150.5	150.7	150.7	150.7	150.7	150.5	150.0
180°	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8

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