

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

Luminaire Tested: **S124RDIP-S575D365U835-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332900
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-S575D365U835-4F0-1E-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: 3657.4 lumens
Efficiency: N/A
Efficacy: 133.0 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

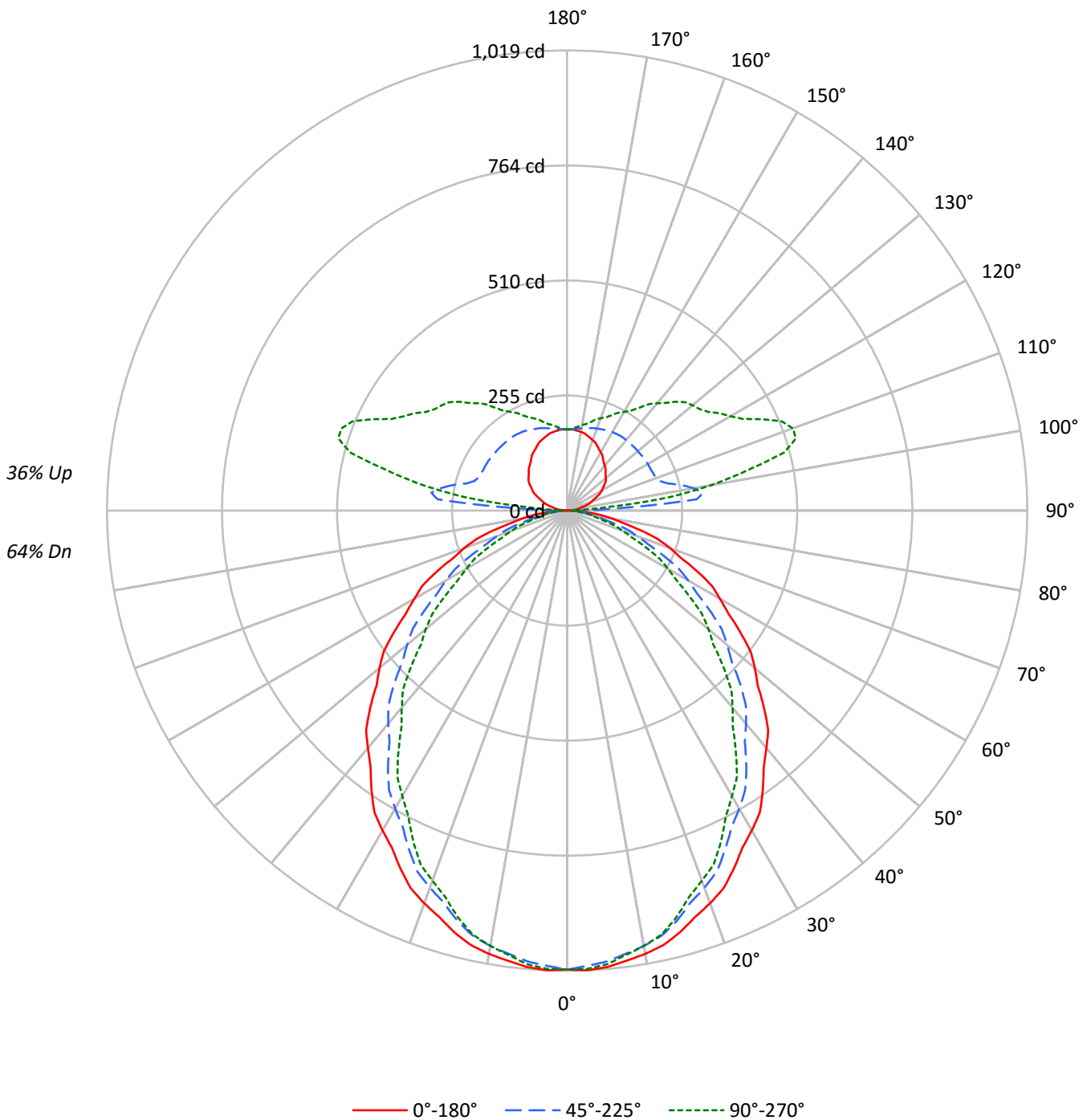
Input Watts (W): 27.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	8205	8205	8205
5°	8223	8122	8173
10°	8171	8025	8025
15°	8078	7856	7798
20°	7948	7635	7494
25°	7784	7375	7187
30°	7623	7101	6804
35°	7447	6818	6419
40°	7233	6495	6003
45°	7036	6174	5579
50°	6812	5805	5130
55°	6572	5422	4643
60°	6307	5000	4146
65°	6065	4474	3656
70°	5712	3895	3104
75°	5268	3228	2523
80°	4593	2459	2315
85°	3890	2232	2093



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.5	2.6
10°-20°	266.2	7.3
20°-30°	384.4	10.5
30°-40°	435.7	11.9
40°-50°	420.8	11.5
50°-60°	349.9	9.6
60°-70°	241.6	6.6
70°-80°	122.5	3.3
80°-90°	32.4	0.9
90°-100°	129.9	3.6
100°-110°	270.4	7.4
110°-120°	242.2	6.6
120°-130°	203.7	5.6
130°-140°	169.9	4.6
140°-150°	129.8	3.5
150°-160°	91.2	2.5
160°-170°	53.7	1.5
170°-180°	17.5	0.5
0°-30°	746.1	20.4
0°-40°	1181.8	32.3
0°-60°	1952.5	53.4
0°-90°	2349.0	64.2
90°-120°	642.6	17.6
90°-150°	1146.0	31.3
90°-180°	1308.0	35.8
0°-180°	3657.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1016	1016	1016	1016	1016	
5°	1015	1011	1002	1010	1008	96
15°	966	959	940	938	933	272
25°	874	859	828	815	807	402
35°	756	730	692	666	651	472
45°	616	586	541	504	489	475
55°	467	435	385	346	330	418
65°	318	283	234	202	191	313
75°	169	140	104	86	81	178
85°	42	27	24	23	23	47
90°	0	3	6	7	7	3
95°	12	37	288	143	86	13
105°	41	60	232	499	497	44
115°	73	91	207	397	478	72
125°	101	121	206	338	381	90
135°	120	144	204	300	341	93
145°	139	159	203	253	278	87
155°	158	171	197	223	233	73
165°	172	177	189	200	203	49
175°	180	180	181	184	183	17
180°	180	180	180	180	180	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3
2.5°	1018.8	1018.2	1017.7	1017.1	1016.6	1015.5	1014.0	1012.5	1010.9	1009.4	1010.9
5°	1014.7	1014.0	1013.3	1012.6	1012.0	1010.6	1008.5	1006.4	1004.3	1002.3	1004.0
7.5°	1005.5	1004.8	1004.1	1003.4	1002.6	1000.9	998.2	995.5	992.8	990.1	991.2
10°	996.8	996.0	995.1	994.2	993.4	991.4	988.3	985.1	982.0	978.9	979.6
12.5°	985.6	984.6	983.6	982.6	981.6	979.3	975.6	971.9	968.3	964.6	965.0
15°	966.5	964.9	963.4	961.8	960.2	957.3	953.0	948.7	944.3	940.0	939.7
17.5°	943.3	941.0	938.8	936.5	934.3	930.6	925.4	920.2	915.0	909.8	908.9
20°	925.2	923.0	920.7	918.5	916.2	912.2	906.3	900.4	894.5	888.7	887.3
22.5°	905.3	902.8	900.3	897.7	895.2	890.8	884.5	878.2	871.9	865.6	863.5
25°	873.9	870.8	867.6	864.5	861.4	856.3	849.2	842.1	835.0	828.0	825.0
27.5°	840.9	837.0	833.1	829.2	825.2	819.5	811.9	804.4	796.8	789.2	785.6
30°	817.8	813.5	809.2	804.9	800.6	794.3	786.2	778.1	769.9	761.8	757.5
32.5°	793.6	788.7	783.8	778.9	774.1	767.4	759.0	750.6	742.2	733.8	728.8
35°	755.6	750.1	744.5	739.0	733.5	726.4	717.7	709.1	700.4	691.8	685.9
37.5°	715.0	709.3	703.6	697.9	692.1	684.5	674.9	665.3	655.8	646.2	639.6
40°	686.3	680.6	674.9	669.2	663.5	655.7	645.9	636.0	626.2	616.3	609.0
42.5°	658.9	653.0	647.0	641.0	635.0	626.9	616.6	606.3	596.1	585.8	578.4
45°	616.3	609.9	603.5	597.1	590.7	582.3	571.9	561.6	551.2	540.8	532.3
47.5°	572.3	565.7	559.0	552.4	545.8	537.1	526.3	515.6	504.8	494.0	485.2
50°	542.4	535.6	528.9	522.1	515.4	506.5	495.4	484.4	473.3	462.2	453.6
52.5°	511.9	505.3	498.7	492.1	485.4	476.5	465.1	453.8	442.4	431.1	422.3
55°	466.9	460.0	453.1	446.1	439.2	430.1	418.9	407.7	396.4	385.2	376.2
57.5°	422.4	415.2	408.0	400.8	393.6	384.5	373.4	362.3	351.3	340.2	331.1
60°	390.6	383.7	376.8	369.9	363.0	354.0	342.9	331.8	320.8	309.7	300.7
62.5°	362.0	354.8	347.6	340.4	333.2	324.0	312.6	301.3	289.9	278.6	270.3
65°	317.5	310.1	302.6	295.2	287.7	278.5	267.4	256.4	245.3	234.2	226.8
67.5°	271.3	264.1	257.0	249.9	242.8	234.1	223.8	213.5	203.3	193.0	186.6
70°	242.0	234.7	227.5	220.2	213.0	204.4	194.5	184.7	174.8	165.0	159.3
72.5°	210.9	204.3	197.7	191.2	184.6	176.7	167.4	158.1	148.7	139.4	134.6
75°	168.9	162.5	156.1	149.7	143.3	136.0	127.9	119.7	111.6	103.5	99.5
77.5°	126.2	120.8	115.4	109.9	104.5	98.5	91.9	85.4	78.8	72.2	69.9
80°	98.8	93.8	88.8	83.8	78.8	73.7	68.5	63.3	58.1	52.9	52.4
82.5°	75.2	70.6	66.0	61.4	56.8	53.0	50.0	47.0	44.1	41.1	40.7
85°	42.0	38.6	35.1	31.6	28.2	26.2	25.7	25.2	24.6	24.1	23.8
87.5°	14.4	13.4	12.5	11.5	10.5	9.8	10.1	10.0	10.0	10.0	9.8
90°	0.4	1.1	2.1	2.5	2.8	2.8	4.9	4.9	5.7	6.4	6.0
92.5°	4.0	5.9	9.2	13.5	18.7	26.0	44.0	71.4	98.1	112.1	93.4
95°	11.7	12.7	16.3	20.9	29.3	44.2	74.9	132.9	217.4	288.0	296.2
97.5°	20.9	20.9	24.0	28.2	35.5	47.9	71.6	119.5	203.4	303.4	372.1
100°	26.9	26.9	29.3	33.6	40.3	51.6	72.5	112.4	184.5	284.2	374.6
102.5°	32.5	33.1	35.3	39.2	45.7	56.4	75.3	110.4	171.8	260.1	353.4
105°	41.4	42.4	44.2	48.4	54.8	65.0	82.0	111.3	160.8	231.8	314.9
107.5°	51.1	51.8	53.6	58.1	64.2	74.3	89.8	116.6	158.8	216.0	283.8
110°	57.6	58.3	60.1	64.3	70.7	80.2	95.8	120.5	159.4	210.6	268.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	63.8	64.5	66.6	70.5	76.9	86.4	101.4	124.8	161.1	208.1	259.5
115°	72.8	73.9	76.3	79.9	86.6	96.1	110.3	131.5	164.3	206.8	251.3
117.5°	82.1	83.1	85.3	89.2	95.5	105.4	118.8	138.3	167.8	206.4	247.6
120°	88.4	89.1	91.5	95.4	101.4	111.3	124.8	143.1	170.4	206.4	245.6
122.5°	94.0	94.7	97.2	100.8	107.4	117.0	130.4	147.7	172.9	206.1	243.4
125°	101.4	102.8	105.0	108.9	115.6	125.5	138.2	154.4	176.7	205.7	239.6
127.5°	108.0	109.1	111.7	116.1	123.1	133.1	145.4	160.3	179.8	204.9	234.6
130°	111.7	113.1	115.9	121.2	127.9	138.2	150.2	164.0	182.0	204.6	231.5
132.5°	115.4	116.5	120.2	125.2	132.5	142.1	154.2	167.7	184.0	204.4	228.7
135°	120.5	121.9	125.5	131.5	138.9	148.1	159.7	172.5	187.0	203.9	224.4
137.5°	125.7	127.0	130.9	136.6	144.3	153.1	164.0	175.9	188.7	203.9	220.8
140°	129.4	130.4	134.3	140.3	147.7	156.2	166.8	178.1	190.1	203.6	218.8
142.5°	133.3	134.4	138.0	143.7	150.8	159.0	169.4	179.8	191.3	203.6	217.1
145°	138.9	140.0	143.5	148.4	155.2	162.9	172.1	181.7	191.9	202.9	214.2
147.5°	145.2	145.5	148.7	153.7	159.3	166.3	174.9	183.3	192.3	201.6	211.6
150°	149.1	149.5	152.3	156.6	161.9	168.6	176.4	184.1	192.3	200.7	209.6
152.5°	152.8	152.9	155.7	159.7	164.4	170.6	177.5	184.7	191.7	199.3	207.3
155°	158.0	158.3	160.5	164.0	167.9	173.2	179.2	185.2	190.9	197.2	203.9
157.5°	163.0	163.0	165.0	167.7	171.1	175.3	180.4	185.2	189.9	195.0	200.5
160°	166.1	166.1	167.5	170.0	172.8	176.7	181.0	185.2	189.1	193.3	197.9
162.5°	168.9	168.7	169.8	172.0	174.5	177.6	181.5	185.2	188.2	191.6	195.7
165°	172.1	172.1	172.8	174.6	176.4	178.5	181.7	184.5	186.6	189.1	191.9
167.5°	175.3	174.9	175.3	176.6	177.6	179.3	181.6	183.6	184.9	186.5	188.5
170°	176.7	176.4	176.7	177.8	178.5	179.5	181.3	183.1	183.8	184.8	186.3
172.5°	178.1	177.8	177.8	178.6	179.0	179.8	181.0	182.5	182.7	183.1	184.3
175°	179.5	179.2	179.2	179.5	179.9	179.9	180.6	181.7	181.3	181.3	182.0
177.5°	180.2	179.9	179.6	179.9	179.9	179.9	180.2	180.7	180.2	180.2	180.5
180°	179.9	179.9	179.9	179.9	179.9	179.9	179.9	179.9	179.9	179.9	179.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3
2.5°	1012.5	1014.0	1015.5	1016.2	1016.1	1015.9	1015.8	1015.7
5°	1005.7	1007.5	1009.2	1009.9	1009.5	1009.2	1008.8	1008.5
7.5°	992.3	993.4	994.6	994.8	994.3	993.7	993.2	992.6
10°	980.3	981.0	981.7	981.7	981.0	980.3	979.6	978.9
12.5°	965.4	965.8	966.3	966.0	965.0	964.1	963.1	962.1
15°	939.3	939.0	938.6	937.9	936.6	935.4	934.2	933.0
17.5°	907.9	906.9	905.9	904.5	902.7	900.9	899.0	897.2
20°	885.9	884.5	883.1	881.3	879.1	876.8	874.6	872.3
22.5°	861.5	859.4	857.3	855.4	853.5	851.7	849.9	848.0
25°	822.1	819.1	816.2	813.9	812.1	810.4	808.7	806.9
27.5°	781.9	778.3	774.7	771.6	769.1	766.6	764.2	761.7
30°	753.2	748.8	744.5	741.0	738.2	735.4	732.7	729.9
32.5°	723.8	718.8	713.7	709.9	707.3	704.7	702.0	699.4
35°	680.0	674.1	668.3	663.8	660.7	657.5	654.4	651.3
37.5°	633.0	626.5	619.9	615.1	611.9	608.8	605.7	602.6
40°	601.8	594.5	587.2	582.1	578.9	575.8	572.7	569.6
42.5°	571.0	563.6	556.2	550.9	547.6	544.4	541.1	537.9
45°	523.9	515.4	506.9	501.1	498.0	494.9	491.8	488.7
47.5°	476.4	467.6	458.8	452.7	449.3	445.9	442.5	439.0
50°	444.9	436.3	427.6	421.7	418.4	415.1	411.8	408.5
52.5°	413.5	404.7	396.0	389.9	386.4	383.0	379.6	376.2
55°	367.2	358.2	349.2	343.1	339.8	336.5	333.2	329.9
57.5°	321.9	312.8	303.7	297.9	295.4	292.9	290.4	287.9
60°	291.7	282.7	273.7	267.9	265.1	262.3	259.6	256.8
62.5°	262.0	253.7	245.4	240.1	237.9	235.7	233.5	231.3
65°	219.4	211.9	204.5	199.7	197.7	195.6	193.5	191.4
67.5°	180.2	173.8	167.4	163.1	160.8	158.5	156.2	153.9
70°	153.6	147.9	142.1	138.4	136.7	135.0	133.2	131.5
72.5°	129.7	124.8	119.9	116.7	115.1	113.5	111.9	110.3
75°	95.5	91.6	87.6	85.1	84.0	83.0	82.0	80.9
77.5°	67.6	65.3	62.9	61.6	61.3	61.0	60.7	60.4
80°	51.9	51.4	50.8	50.5	50.3	50.1	50.0	49.8
82.5°	40.3	39.9	39.6	39.3	39.1	38.9	38.8	38.6
85°	23.4	23.1	22.7	22.6	22.6	22.6	22.6	22.6
87.5°	9.7	9.6	9.6	9.6	9.8	10.0	10.1	10.2
90°	6.4	6.7	7.1	7.1	7.4	7.8	7.4	7.4
92.5°	69.4	52.2	41.6	34.5	30.3	28.4	27.2	27.2
95°	261.9	207.1	159.7	125.5	108.1	97.2	90.8	86.2
97.5°	386.9	366.6	332.0	295.1	269.7	248.5	237.9	230.5
100°	426.2	433.3	416.0	389.8	359.1	337.5	326.9	324.1
102.5°	424.3	459.3	464.3	453.4	434.6	419.0	407.8	405.5
105°	395.8	457.0	492.0	506.5	507.2	504.3	499.4	497.3
107.5°	355.5	420.6	469.8	501.4	518.8	526.9	530.4	531.3
110°	331.2	392.3	443.6	482.4	507.5	522.4	528.7	531.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	313.3	367.4	415.8	454.7	483.2	501.2	510.1	515.2
115°	295.5	338.9	380.3	414.2	442.1	463.3	474.7	477.5
117.5°	286.7	322.7	355.2	384.0	407.8	425.6	437.0	439.2
120°	282.7	315.6	343.9	369.0	389.1	404.7	413.9	417.8
122.5°	279.3	311.1	336.8	358.8	375.8	389.1	396.9	400.8
125°	273.6	303.9	328.3	347.8	361.9	372.2	378.9	381.0
127.5°	266.5	295.5	319.9	338.3	352.5	361.6	367.3	369.4
130°	260.8	288.8	312.8	331.5	346.0	354.8	360.5	362.6
132.5°	254.9	281.1	304.6	323.3	337.5	347.5	352.9	355.0
135°	246.7	269.7	291.2	308.9	323.0	332.9	338.6	340.7
137.5°	239.3	258.7	276.9	292.8	306.1	315.8	320.5	323.0
140°	235.0	251.6	267.5	282.4	294.8	302.5	307.5	310.3
142.5°	231.1	245.7	259.3	272.2	283.2	290.4	294.8	296.7
145°	225.5	237.5	248.1	258.0	266.8	272.8	276.4	278.1
147.5°	220.9	230.4	238.9	246.7	253.2	258.4	261.0	261.7
150°	218.1	226.2	233.3	239.6	245.3	249.9	252.0	252.3
152.5°	215.0	222.0	228.5	233.7	238.5	242.2	243.5	243.9
155°	210.3	215.9	221.2	225.5	229.0	231.8	232.9	232.9
157.5°	205.3	210.0	214.5	217.9	220.5	222.7	223.3	223.3
160°	202.2	206.0	209.9	212.8	214.9	217.0	217.4	217.4
162.5°	199.1	202.4	205.4	208.0	209.5	211.6	212.0	211.7
165°	194.7	196.9	199.3	201.1	202.5	203.9	203.6	203.2
167.5°	190.6	192.2	194.2	195.2	195.9	196.9	196.8	196.5
170°	188.0	189.1	190.5	191.6	192.3	192.6	192.3	192.3
172.5°	185.8	186.5	187.4	188.2	188.6	188.9	188.6	188.0
175°	182.7	183.1	183.8	183.8	183.8	184.5	183.8	183.1
177.5°	180.7	181.0	181.0	181.3	181.0	181.3	180.7	180.2
180°	179.9	179.9	179.9	179.9	179.9	179.9	179.9	179.9

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