

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: P332601-935

Luminaire Tested: **S124DIP-S795D810U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332601-935  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIP-S795D810U935-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 810 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5574.7 lumens  
Efficiency: N/A  
Efficacy: 121.5 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

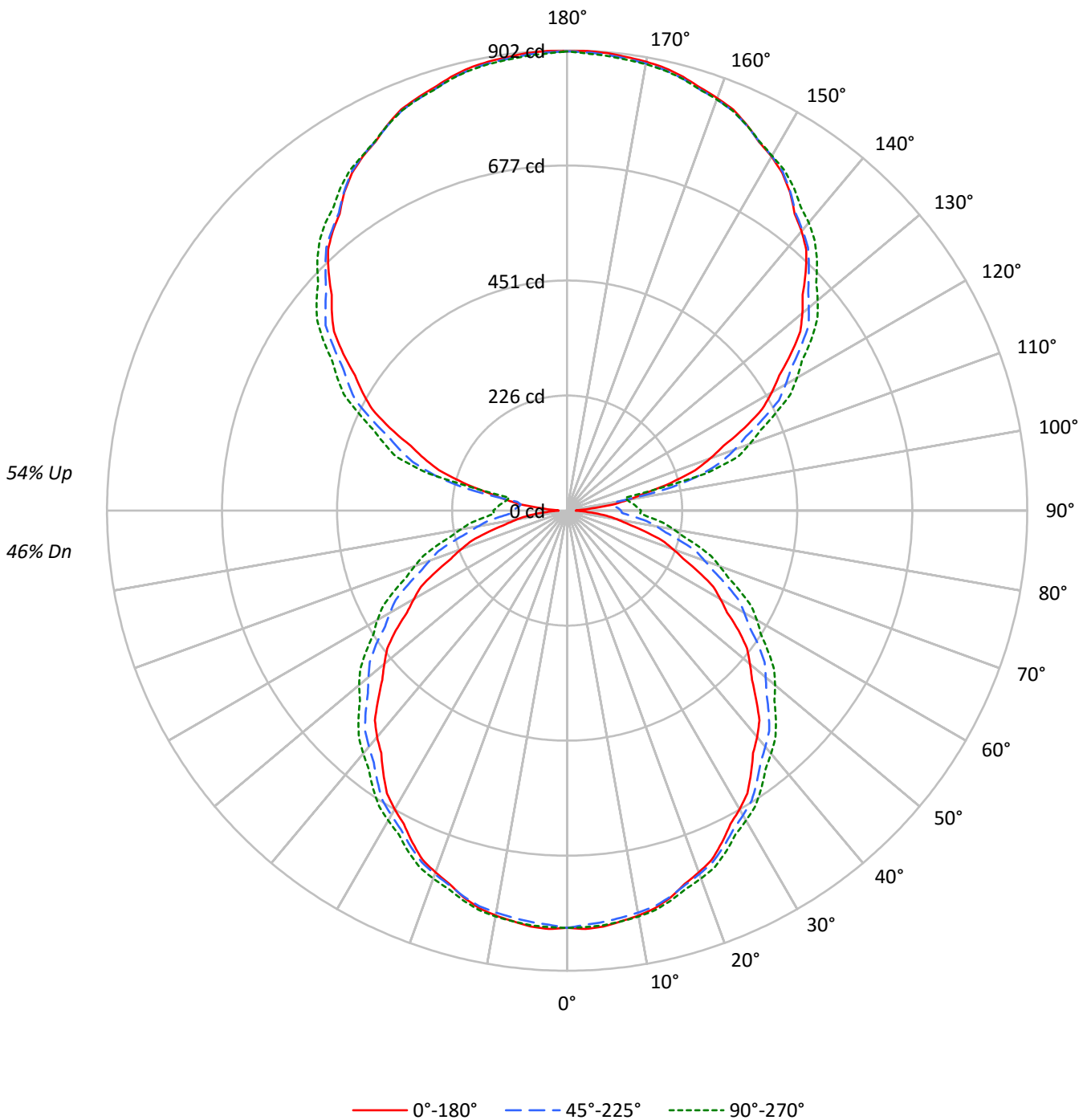
Input Watts (W): 45.9  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	106	106	106	106	98	98	98	98	81	81	81	66	66	66	53	53	53	46
1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	43	37
2	87	79	73	67	79	73	67	62	61	56	53	49	46	44	39	37	35	30
3	79	69	62	55	72	64	57	52	53	48	44	43	40	37	34	32	29	25
4	72	61	53	47	66	56	49	43	47	41	37	38	34	31	30	28	25	21
5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18
6	61	48	40	34	55	45	37	32	38	32	28	31	27	23	25	21	19	16
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	22	19	17	14
8	52	40	32	26	48	37	30	25	31	25	21	26	21	18	21	17	15	12
9	48	36	28	23	44	33	27	22	28	23	19	24	19	16	19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	14	12	10

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6603	6603	6603
5°	6622	6453	6471
10°	6582	6347	6342
15°	6524	6225	6190
20°	6435	6090	6044
25°	6334	5939	5882
30°	6226	5788	5714
35°	6103	5635	5569
40°	6004	5488	5417
45°	5858	5352	5286
50°	5735	5197	5149
55°	5608	5051	4987
60°	5409	4863	4840
65°	5191	4662	4657
70°	4927	4433	4447
75°	4561	4182	4255
80°	4149	3940	4067
85°	3636	3724	3960



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.4	1.4
10°-20°	221.9	4.0
20°-30°	335.5	6.0
30°-40°	405.9	7.3
40°-50°	429.2	7.7
50°-60°	403.9	7.2
60°-70°	335.1	6.0
70°-80°	235.4	4.2
80°-90°	135.7	2.4
90°-100°	109.8	2.0
100°-110°	254.8	4.6
110°-120°	414.7	7.4
120°-130°	498.8	8.9
130°-140°	519.6	9.3
140°-150°	478.8	8.6
150°-160°	384.6	6.9
160°-170°	248.0	4.4
170°-180°	85.5	1.5
0°-30°	634.9	11.4
0°-40°	1040.8	18.7
0°-60°	1873.9	33.6
0°-90°	2580.1	46.3
90°-120°	779.3	14.0
90°-150°	2276.5	40.8
90°-180°	2995.0	53.7
0°-180°	5574.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	818	818	818	818	818	
5°	819	816	810	816	816	78
15°	785	786	783	791	790	221
25°	718	723	726	736	737	331
35°	628	639	648	661	664	393
45°	524	541	559	574	579	405
55°	410	430	457	475	481	365
65°	284	313	344	366	374	281
75°	158	192	230	255	264	168
85°	49	87	128	155	165	52
90°	17	61	106	135	145	11
95°	49	58	94	122	132	57
105°	211	234	270	297	282	221
115°	384	395	423	443	451	378
125°	536	538	559	578	584	478
135°	662	661	670	685	693	510
145°	762	763	763	769	774	476
155°	834	835	833	835	833	384
165°	880	877	876	881	876	249
175°	900	896	897	902	895	86
180°	900	900	900	900	900	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9
2.5°	820.8	820.3	819.8	819.3	818.8	817.9	816.6	815.3	814.0	812.7	813.8
5°	818.7	818.1	817.5	816.9	816.3	815.3	813.8	812.4	811.0	809.6	811.2
7.5°	811.8	811.4	811.1	810.7	810.3	809.5	808.4	807.2	806.0	804.9	806.7
10°	805.9	805.7	805.6	805.3	805.1	804.5	803.5	802.5	801.4	800.4	802.3
12.5°	797.9	797.8	797.8	797.7	797.7	797.4	796.7	795.9	795.2	794.5	796.3
15°	784.9	785.1	785.2	785.5	785.7	785.5	784.9	784.3	783.6	783.0	784.9
17.5°	767.1	767.7	768.3	769.0	769.6	769.7	769.6	769.6	769.4	769.3	771.2
20°	754.7	755.3	755.9	756.5	757.1	757.5	757.7	757.9	758.1	758.3	760.3
22.5°	740.7	741.5	742.3	743.0	743.8	744.4	744.8	745.1	745.5	745.9	747.9
25°	718.0	719.2	720.5	721.7	722.9	723.8	724.4	725.0	725.7	726.3	728.5
27.5°	692.8	694.5	696.3	698.1	699.9	701.3	702.2	703.1	704.0	705.0	707.1
30°	675.9	677.5	679.2	680.8	682.4	683.9	685.4	686.7	688.2	689.6	691.8
32.5°	657.5	659.5	661.5	663.4	665.4	667.1	668.7	670.3	671.9	673.5	676.1
35°	628.3	630.7	633.2	635.6	638.0	640.2	642.3	644.4	646.4	648.4	651.3
37.5°	598.7	601.6	604.4	607.2	610.0	612.7	615.2	617.7	620.3	622.8	625.7
40°	579.7	582.4	585.0	587.6	590.3	593.1	595.9	598.7	601.6	604.4	607.5
42.5°	557.8	560.7	563.7	566.6	569.6	572.7	576.1	579.5	582.8	586.1	589.5
45°	523.8	527.7	531.6	535.5	539.3	543.2	547.1	551.0	554.7	558.6	562.1
47.5°	491.5	495.4	499.4	503.4	507.4	511.6	516.1	520.6	525.0	529.5	533.1
50°	468.0	472.4	476.9	481.4	485.9	490.3	494.8	499.3	503.8	508.2	512.4
52.5°	444.5	449.0	453.5	458.0	462.4	467.3	472.3	477.5	482.7	487.8	491.8
55°	410.3	414.6	418.9	423.1	427.4	432.6	438.7	444.8	450.9	457.0	461.1
57.5°	372.0	377.3	382.6	387.9	393.1	398.8	404.9	411.0	417.1	423.1	427.9
60°	347.1	352.4	357.7	363.0	368.2	374.3	381.0	387.7	394.4	401.1	405.8
62.5°	322.9	328.7	334.5	340.3	346.0	352.3	359.0	365.8	372.5	379.2	383.8
65°	283.9	290.4	297.0	303.4	310.0	316.7	323.6	330.5	337.4	344.3	349.4
67.5°	246.3	253.3	260.2	267.1	274.1	281.2	288.6	296.0	303.4	310.8	316.0
70°	220.7	227.6	234.5	241.5	248.4	255.7	263.5	271.2	278.9	286.6	292.1
72.5°	195.8	202.9	210.0	217.1	224.1	231.8	240.0	248.2	256.5	264.7	270.0
75°	157.6	165.1	172.5	180.1	187.6	195.7	204.2	212.8	221.4	229.9	235.6
77.5°	121.8	129.8	137.8	145.8	153.7	162.2	171.2	180.1	189.1	198.0	203.8
80°	99.8	108.0	116.1	124.2	132.4	140.9	149.9	158.9	167.8	176.8	182.9
82.5°	77.8	86.3	94.8	103.2	111.7	120.5	129.4	138.4	147.3	156.3	162.5
85°	48.6	57.1	65.6	74.2	82.7	91.6	100.7	109.9	119.1	128.2	134.3
87.5°	27.6	36.2	44.8	53.4	62.1	70.9	80.1	89.2	98.4	107.5	113.7
90°	16.7	26.4	36.2	46.1	55.8	65.7	75.6	85.6	95.6	105.5	112.3
92.5°	22.4	29.8	37.2	44.7	52.1	60.8	70.7	80.7	90.6	100.6	107.2
95°	48.9	50.5	52.2	53.8	55.4	60.5	69.0	77.5	86.0	94.5	100.9
97.5°	89.5	98.4	107.4	116.3	125.3	125.5	117.1	108.7	100.2	91.8	97.2
100°	120.5	128.5	136.5	144.5	152.4	150.1	137.3	124.7	111.9	99.2	102.2
102.5°	156.0	162.6	169.3	175.9	182.4	188.3	193.4	198.5	203.5	208.6	186.6
105°	210.9	215.9	220.8	225.8	230.7	237.4	245.6	253.9	262.2	270.5	276.9
107.5°	263.4	267.2	270.9	274.7	278.4	284.5	292.6	300.7	308.8	317.0	322.7
110°	298.2	301.4	304.7	308.1	311.3	317.0	325.0	333.0	341.0	349.0	354.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	331.9	335.2	338.5	341.9	345.2	350.5	357.7	364.9	372.1	379.4	383.8
115°	383.8	386.2	388.4	390.7	393.0	397.3	403.6	410.0	416.4	422.8	427.5
117.5°	431.4	433.2	434.8	436.5	438.2	442.3	448.7	455.0	461.5	467.9	472.0
120°	463.0	464.3	465.5	466.7	467.9	471.3	477.1	482.8	488.6	494.4	498.7
122.5°	493.2	493.7	494.1	494.6	495.2	498.3	504.0	509.8	515.6	521.4	525.6
125°	535.5	535.9	536.3	536.7	537.1	539.7	544.5	549.2	554.1	558.8	563.2
127.5°	576.3	576.2	576.1	576.1	576.0	578.3	582.9	587.5	592.1	596.7	600.3
130°	601.9	601.8	601.8	601.8	601.7	603.5	607.2	611.0	614.7	618.4	622.2
132.5°	626.1	626.2	626.3	626.4	626.4	628.0	631.2	634.4	637.6	640.8	644.4
135°	661.6	661.4	661.2	661.2	661.0	661.9	663.9	666.0	668.0	670.0	673.6
137.5°	693.8	693.6	693.4	693.4	693.2	693.8	695.2	696.5	697.8	699.2	702.5
140°	714.7	714.9	715.0	715.1	715.1	715.4	715.9	716.4	717.0	717.5	720.6
142.5°	732.9	733.4	733.8	734.3	734.9	735.1	735.2	735.3	735.3	735.4	738.0
145°	761.6	761.9	762.2	762.4	762.6	762.8	762.8	762.8	762.8	762.8	764.1
147.5°	784.6	785.3	785.9	786.6	787.2	787.5	787.3	787.1	787.0	786.9	787.1
150°	801.3	801.8	802.1	802.5	803.0	803.1	802.9	802.8	802.6	802.5	802.5
152.5°	814.6	815.1	815.5	816.0	816.4	816.5	816.2	816.0	815.6	815.4	815.6
155°	834.1	834.2	834.4	834.6	834.7	834.6	834.1	833.6	833.2	832.8	833.4
157.5°	850.7	850.6	850.5	850.4	850.3	850.0	849.5	849.0	848.5	848.0	848.8
160°	860.4	859.9	859.5	859.0	858.6	858.2	858.2	858.0	857.8	857.6	858.6
162.5°	869.0	868.4	867.8	867.3	866.7	866.3	866.2	866.1	865.9	865.7	866.7
165°	879.9	879.2	878.4	877.6	876.9	876.5	876.5	876.5	876.5	876.5	877.7
167.5°	888.5	887.7	886.9	886.1	885.4	884.9	884.8	884.8	884.7	884.6	885.9
170°	893.4	892.4	891.6	890.6	889.8	889.4	889.5	889.7	889.8	890.0	891.1
172.5°	896.6	895.7	894.8	893.9	893.0	892.6	892.8	892.9	893.0	893.2	894.4
175°	900.1	899.1	898.3	897.4	896.5	896.1	896.3	896.4	896.6	896.7	898.0
177.5°	901.7	900.9	900.0	899.1	898.4	898.0	898.3	898.5	898.8	899.0	899.9
180°	900.1	900.1	900.1	900.1	900.1	900.1	900.1	900.1	900.1	900.1	900.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9
2.5°	814.9	816.1	817.3	817.8	817.6	817.4	817.3	817.1
5°	812.9	814.5	816.1	816.8	816.6	816.4	816.2	816.0
7.5°	808.5	810.3	812.2	813.0	812.8	812.5	812.4	812.2
10°	804.1	805.9	807.8	808.6	808.4	808.1	808.0	807.8
12.5°	797.9	799.6	801.2	802.0	802.0	801.9	801.9	801.8
15°	786.7	788.5	790.3	791.2	791.0	790.7	790.6	790.3
17.5°	773.0	774.9	776.8	777.7	777.5	777.3	777.1	777.0
20°	762.3	764.4	766.5	767.5	767.5	767.5	767.5	767.5
22.5°	749.9	751.9	754.0	755.2	755.5	755.8	756.1	756.5
25°	730.7	733.0	735.2	736.4	736.6	736.8	737.0	737.3
27.5°	709.1	711.2	713.3	714.5	714.7	715.0	715.2	715.4
30°	694.1	696.3	698.5	699.9	700.3	700.7	701.1	701.5
32.5°	678.6	681.2	683.7	685.3	685.6	686.0	686.5	686.9
35°	654.1	656.9	659.8	661.5	662.1	662.7	663.4	664.0
37.5°	628.5	631.5	634.3	636.1	636.7	637.4	638.0	638.7
40°	610.5	613.6	616.6	618.5	619.4	620.2	621.0	621.8
42.5°	592.9	596.2	599.6	601.7	602.3	603.0	603.6	604.2
45°	565.6	569.0	572.5	574.7	575.8	576.8	577.8	578.8
47.5°	536.7	540.3	543.9	546.2	547.5	548.7	549.9	551.1
50°	516.4	520.5	524.5	527.2	528.4	529.7	530.9	532.1
52.5°	495.9	500.0	504.0	506.7	507.9	509.1	510.3	511.6
55°	465.1	469.2	473.3	476.0	477.2	478.4	479.6	480.8
57.5°	432.8	437.6	442.5	445.5	446.6	447.7	448.9	450.0
60°	410.5	415.2	419.8	423.0	424.6	426.3	427.9	429.6
62.5°	388.5	393.2	397.9	401.1	402.7	404.3	405.9	407.5
65°	354.6	359.6	364.7	368.1	369.7	371.3	372.9	374.5
67.5°	321.2	326.3	331.5	334.8	336.5	338.0	339.7	341.2
70°	297.6	303.2	308.7	312.1	313.5	315.0	316.3	317.8
72.5°	275.3	280.7	286.0	289.5	291.0	292.7	294.2	295.8
75°	241.3	246.9	252.7	256.4	258.3	260.1	261.9	263.7
77.5°	209.6	215.3	221.1	225.0	227.0	228.9	230.8	232.8
80°	189.0	195.1	201.2	205.0	206.6	208.3	209.9	211.5
82.5°	168.8	175.0	181.3	185.4	187.1	188.9	190.7	192.5
85°	140.4	146.5	152.7	156.7	158.8	160.7	162.8	164.9
87.5°	119.7	125.8	131.9	135.9	137.7	139.6	141.4	143.3
90°	119.1	125.9	132.7	137.1	139.0	140.9	142.8	144.7
92.5°	113.8	120.5	127.1	131.2	132.9	134.7	136.3	138.0
95°	107.3	113.7	120.0	124.2	126.2	128.2	130.2	132.2
97.5°	102.6	108.1	113.5	117.1	119.0	120.9	122.8	124.8
100°	105.1	108.1	111.1	113.3	114.9	116.4	118.0	119.6
102.5°	164.5	142.3	120.3	110.0	111.6	113.2	114.9	116.5
105°	283.4	289.8	296.2	297.6	293.8	290.1	286.3	282.5
107.5°	328.3	334.0	339.7	343.5	345.5	347.6	349.7	351.6
110°	359.0	364.0	369.0	372.6	374.6	376.7	378.8	380.8





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	388.3	392.7	397.2	400.5	402.7	404.9	407.1	409.3
115°	432.3	437.0	441.9	445.0	446.3	447.8	449.2	450.6
117.5°	476.2	480.4	484.6	487.4	489.0	490.6	492.1	493.7
120°	503.1	507.5	511.9	514.7	516.0	517.4	518.7	520.0
122.5°	529.9	534.2	538.4	541.1	542.3	543.5	544.6	545.8
125°	567.5	571.8	576.1	578.9	580.3	581.7	583.1	584.4
127.5°	603.8	607.4	611.0	613.4	614.7	616.0	617.2	618.5
130°	625.9	629.7	633.6	636.1	637.3	638.5	639.7	641.0
132.5°	648.0	651.7	655.3	657.7	658.8	659.9	661.0	662.1
135°	677.1	680.7	684.2	686.7	688.3	689.8	691.3	692.8
137.5°	705.8	709.1	712.4	714.5	715.4	716.4	717.3	718.2
140°	723.7	726.8	729.9	731.9	733.1	734.3	735.5	736.7
142.5°	740.6	743.3	746.0	747.8	748.6	749.5	750.4	751.3
145°	765.5	766.9	768.3	769.5	770.6	771.7	772.8	774.0
147.5°	787.4	787.7	788.0	788.5	789.3	790.1	790.9	791.7
150°	802.5	802.5	802.5	802.5	802.7	802.8	803.0	803.1
152.5°	815.9	816.1	816.3	816.4	816.3	816.2	816.1	816.1
155°	834.0	834.6	835.2	835.3	834.7	834.3	833.9	833.4
157.5°	849.5	850.3	851.1	851.1	850.3	849.5	848.8	848.0
160°	859.5	860.4	861.3	861.3	860.4	859.5	858.6	857.6
162.5°	867.5	868.4	869.4	869.3	868.2	867.2	866.3	865.2
165°	878.9	880.1	881.3	881.2	879.9	878.6	877.2	875.8
167.5°	887.3	888.6	889.8	889.8	888.3	886.7	885.3	883.8
170°	892.3	893.5	894.8	894.6	893.1	891.7	890.1	888.6
172.5°	895.6	896.8	898.0	897.8	896.2	894.6	892.9	891.3
175°	899.4	900.8	902.1	901.9	900.1	898.3	896.5	894.7
177.5°	901.0	901.9	902.8	902.6	901.1	899.7	898.3	896.8
180°	900.1	900.1	900.1	900.1	900.1	900.1	900.1	900.1

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