

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: P332602-830

Luminaire Tested: **S124DIP-S795D810U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332602-830  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIP-S795D810U830-4F0-1E-UDD-D1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 810 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5698.1 lumens  
Efficiency: N/A  
Efficacy: 124.1 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

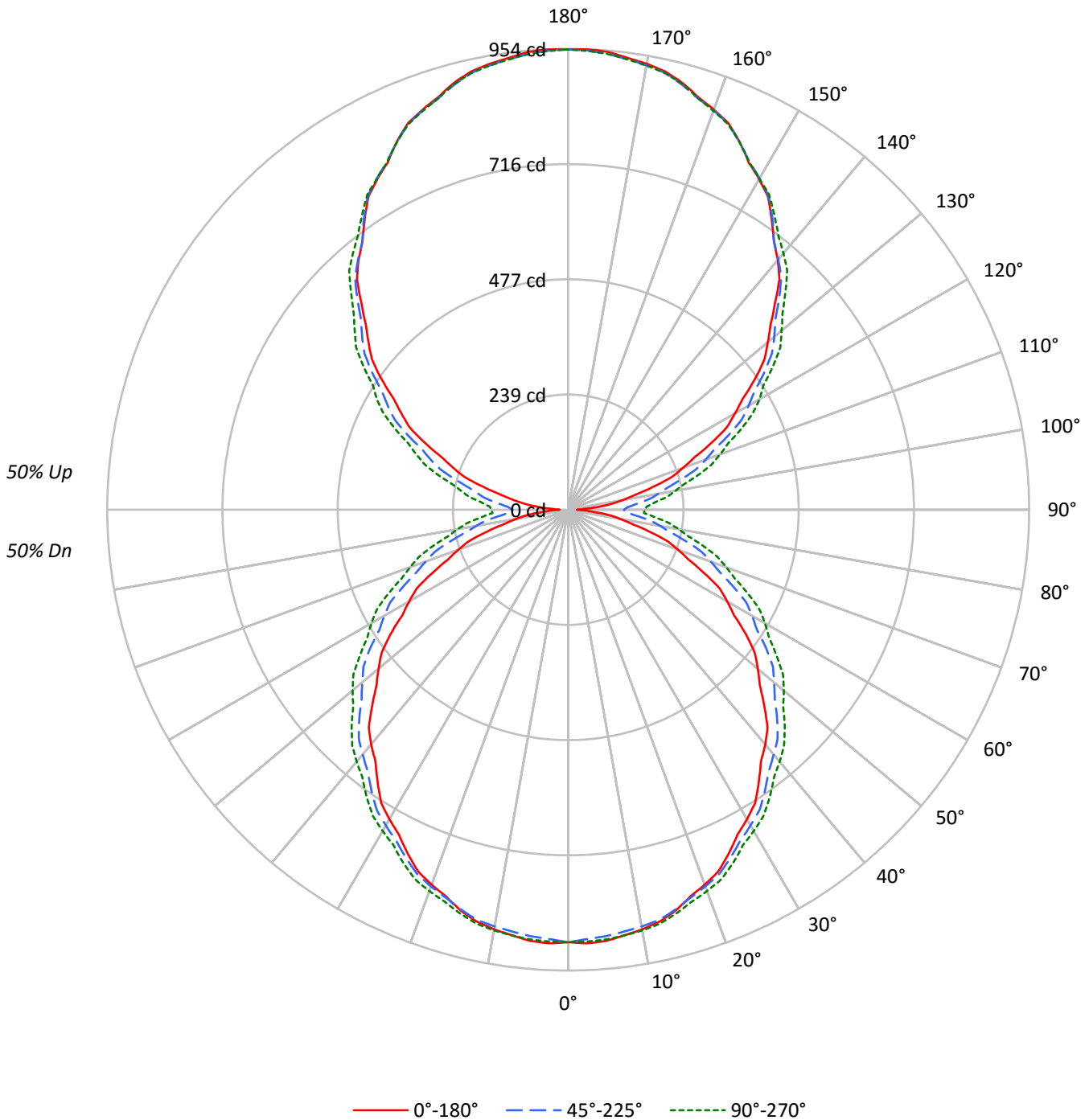
Input Watts (W): 45.9  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	48	46	45	40
2	88	80	73	68	80	73	68	63	62	58	54	51	48	45	41	39	37	32
3	80	70	62	56	73	64	58	52	54	49	45	45	41	38	36	33	31	27
4	73	61	53	47	67	57	49	44	48	42	38	40	36	32	32	29	27	23
5	67	55	46	40	61	50	43	37	43	37	32	36	31	28	29	26	23	20
6	61	49	40	34	56	45	38	32	38	33	28	32	28	24	26	23	20	17
7	57	44	36	30	52	41	33	28	35	29	25	29	25	21	24	20	18	15
8	52	40	32	26	48	37	30	25	32	26	22	27	22	19	22	18	16	13
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	17	23	18	15	19	15	13	11

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

	0°	45°	90°
0°	7228	7228	7228
5°	7250	7064	7083
10°	7205	6948	6943
15°	7141	6814	6777
20°	7044	6667	6616
25°	6934	6501	6439
30°	6815	6336	6256
35°	6681	6168	6097
40°	6573	6008	5930
45°	6413	5859	5787
50°	6278	5689	5636
55°	6138	5529	5459
60°	5920	5324	5298
65°	5683	5104	5098
70°	5394	4853	4868
75°	4992	4579	4659
80°	4540	4312	4453
85°	3980	4075	4334



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.8	1.5
10°-20°	242.9	4.3
20°-30°	367.3	6.4
30°-40°	444.4	7.8
40°-50°	469.8	8.2
50°-60°	442.2	7.8
60°-70°	366.8	6.4
70°-80°	257.7	4.5
80°-90°	148.5	2.6
90°-100°	149.3	2.6
100°-110°	250.2	4.4
110°-120°	358.9	6.3
120°-130°	440.9	7.7
130°-140°	478.4	8.4
140°-150°	461.9	8.1
150°-160°	386.7	6.8
160°-170°	257.3	4.5
170°-180°	90.1	1.6
0°-30°	695.0	12.2
0°-40°	1139.4	20.0
0°-60°	2051.4	36.0
0°-90°	2824.4	49.6
90°-120°	758.5	13.3
90°-150°	2139.6	37.5
90°-180°	2874.0	50.4
0°-180°	5698.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	895	895	895	895	895	
5°	896	893	886	894	893	85
15°	859	860	857	866	865	242
25°	786	792	795	806	807	362
35°	688	700	710	723	727	431
45°	573	593	612	628	634	443
55°	449	471	500	520	526	400
65°	311	343	377	401	410	308
75°	172	210	252	279	289	183
85°	53	95	140	169	180	57
90°	18	66	116	148	158	13
95°	57	97	143	171	182	60
105°	181	203	242	268	279	192
115°	327	338	367	387	394	323
125°	472	472	495	512	517	421
135°	606	610	617	631	635	469
145°	734	736	737	742	744	459
155°	840	840	839	842	839	386
165°	914	912	911	915	912	258
175°	951	948	947	952	947	90
180°	953	953	953	953	953	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3
2.5°	898.5	898.0	897.4	896.9	896.4	895.4	893.9	892.5	891.1	889.7	890.9
5°	896.3	895.6	894.9	894.3	893.6	892.5	890.9	889.4	887.8	886.3	888.1
7.5°	888.6	888.3	887.9	887.5	887.0	886.2	885.0	883.6	882.3	881.1	883.1
10°	882.2	882.0	881.8	881.6	881.4	880.7	879.6	878.4	877.3	876.2	878.3
12.5°	873.5	873.4	873.4	873.3	873.3	872.9	872.1	871.3	870.5	869.8	871.7
15°	859.2	859.4	859.6	859.9	860.1	859.9	859.2	858.6	857.8	857.1	859.2
17.5°	839.7	840.4	841.0	841.8	842.4	842.6	842.5	842.4	842.3	842.2	844.2
20°	826.1	826.8	827.5	828.1	828.8	829.2	829.4	829.6	829.9	830.1	832.4
22.5°	810.9	811.7	812.6	813.4	814.3	814.9	815.3	815.7	816.1	816.5	818.7
25°	786.0	787.3	788.7	790.0	791.4	792.4	793.1	793.7	794.4	795.0	797.5
27.5°	758.4	760.3	762.2	764.2	766.2	767.7	768.7	769.7	770.7	771.8	774.0
30°	739.9	741.7	743.5	745.3	747.1	748.7	750.3	751.8	753.4	754.9	757.3
32.5°	719.8	722.0	724.2	726.2	728.4	730.3	732.1	733.8	735.6	737.3	740.1
35°	687.8	690.4	693.1	695.8	698.4	700.9	703.1	705.4	707.6	709.8	712.9
37.5°	655.4	658.6	661.7	664.7	667.8	670.7	673.4	676.2	679.0	681.7	684.9
40°	634.6	637.5	640.4	643.3	646.2	649.2	652.3	655.4	658.6	661.7	665.1
42.5°	610.6	613.8	617.1	620.3	623.6	627.0	630.7	634.3	638.0	641.6	645.4
45°	573.4	577.7	581.9	586.2	590.4	594.7	598.9	603.1	607.3	611.5	615.4
47.5°	538.0	542.3	546.7	551.1	555.4	560.1	565.0	569.9	574.8	579.7	583.6
50°	512.3	517.2	522.1	527.0	531.9	536.8	541.7	546.6	551.5	556.4	560.9
52.5°	486.6	491.5	496.4	501.3	506.2	511.5	517.1	522.7	528.4	534.0	538.4
55°	449.1	453.8	458.5	463.2	467.9	473.5	480.2	486.9	493.6	500.3	504.7
57.5°	407.3	413.0	418.9	424.6	430.4	436.6	443.3	449.9	456.6	463.2	468.4
60°	379.9	385.8	391.5	397.4	403.1	409.7	417.1	424.4	431.8	439.1	444.2
62.5°	353.5	359.9	366.2	372.5	378.8	385.7	393.0	400.4	407.7	415.1	420.2
65°	310.8	317.9	325.1	332.2	339.3	346.7	354.2	361.8	369.4	376.9	382.5
67.5°	269.7	277.3	284.8	292.4	300.0	307.8	315.9	324.0	332.2	340.3	345.9
70°	241.6	249.2	256.7	264.4	271.9	279.9	288.4	296.9	305.3	313.8	319.8
72.5°	214.3	222.1	229.9	237.6	245.3	253.7	262.8	271.7	280.8	289.7	295.6
75°	172.5	180.7	188.9	197.2	205.4	214.2	223.6	232.9	242.3	251.7	257.9
77.5°	133.4	142.0	150.8	159.6	168.2	177.6	187.4	197.2	207.0	216.8	223.1
80°	109.2	118.2	127.1	136.0	145.0	154.3	164.1	173.9	183.7	193.5	200.2
82.5°	85.2	94.4	103.8	113.0	122.2	131.9	141.7	151.5	161.3	171.1	177.9
85°	53.2	62.5	71.8	81.2	90.6	100.3	110.3	120.3	130.4	140.3	147.0
87.5°	30.2	39.6	49.0	58.4	68.0	77.7	87.7	97.6	107.7	117.7	124.4
90°	18.3	28.9	39.7	50.4	61.1	71.9	82.8	93.7	104.5	115.5	122.9
92.5°	31.0	41.1	51.2	61.3	71.4	81.6	92.1	102.6	113.1	123.7	130.4
95°	57.2	66.1	74.9	83.7	92.6	102.1	112.4	122.6	132.9	143.3	149.8
97.5°	89.1	96.5	104.1	111.6	119.0	128.0	138.5	148.8	159.2	169.6	176.0
100°	114.2	120.6	127.1	133.6	140.0	148.3	158.4	168.6	178.8	189.0	195.3
102.5°	141.3	146.7	152.0	157.3	162.7	170.2	180.1	190.0	199.8	209.7	215.9
105°	180.7	185.3	189.9	194.5	199.2	205.9	214.8	223.8	232.6	241.6	247.6
107.5°	223.9	227.8	231.7	235.5	239.4	245.2	253.2	261.1	268.9	276.8	282.8
110°	252.7	256.1	259.6	263.0	266.5	272.0	279.7	287.3	294.9	302.6	307.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	282.5	285.3	288.1	291.0	293.8	298.8	305.9	313.1	320.3	327.4	332.2
115°	327.3	329.3	331.3	333.3	335.4	339.7	346.5	353.4	360.1	366.9	371.6
117.5°	370.4	371.7	373.1	374.4	375.8	379.7	386.1	392.5	398.9	405.3	409.3
120°	398.5	399.8	401.1	402.5	403.8	407.5	413.4	419.3	425.4	431.3	435.0
122.5°	428.6	429.0	429.3	429.7	430.2	433.3	439.1	445.1	450.9	456.8	460.7
125°	471.9	471.7	471.5	471.3	471.0	473.6	479.0	484.5	489.8	495.2	499.2
127.5°	512.0	512.2	512.5	512.7	513.0	515.2	519.2	523.2	527.3	531.2	534.9
130°	539.4	539.7	540.0	540.3	540.5	542.4	546.0	549.6	553.2	556.7	560.3
132.5°	568.4	568.4	568.6	568.7	568.9	570.3	573.1	575.8	578.4	581.2	584.7
135°	605.5	606.5	607.5	608.4	609.4	610.7	612.3	613.8	615.4	616.9	620.2
137.5°	647.1	647.3	647.5	647.8	648.0	648.7	649.7	650.6	651.7	652.7	655.5
140°	674.8	674.9	675.0	675.0	675.1	675.3	675.6	675.8	676.0	676.3	679.0
142.5°	699.3	699.6	699.8	700.1	700.4	700.5	700.2	699.9	699.6	699.4	701.9
145°	734.1	734.6	735.1	735.5	735.9	736.2	736.4	736.5	736.7	736.9	738.0
147.5°	768.9	769.5	770.1	770.6	771.2	771.5	771.3	771.2	771.0	770.9	771.0
150°	790.2	790.6	791.1	791.5	791.9	792.1	792.1	792.1	792.1	792.1	792.1
152.5°	809.5	809.7	810.1	810.5	810.8	811.1	811.2	811.3	811.4	811.6	812.0
155°	840.0	840.0	840.0	840.0	840.0	839.9	839.8	839.6	839.4	839.3	839.9
157.5°	866.0	865.6	865.3	865.1	864.8	864.6	864.6	864.6	864.5	864.5	865.0
160°	881.3	881.1	881.0	880.8	880.6	880.4	880.3	880.1	880.0	879.9	880.3
162.5°	895.4	895.0	894.6	894.2	893.7	893.4	893.2	893.2	893.0	892.8	893.7
165°	914.5	914.0	913.5	912.9	912.5	912.1	911.7	911.4	911.1	910.8	911.7
167.5°	929.1	928.3	927.7	927.0	926.3	926.0	926.0	926.0	926.0	926.0	927.1
170°	937.3	936.5	935.7	934.8	934.1	933.7	933.9	934.1	934.2	934.3	935.3
172.5°	943.2	942.5	941.8	941.1	940.5	940.1	940.2	940.2	940.2	940.3	941.3
175°	951.3	950.5	949.6	948.9	948.0	947.5	947.3	947.2	947.1	946.9	948.0
177.5°	953.9	953.3	952.6	952.0	951.3	951.0	951.0	951.0	951.0	951.0	951.9
180°	952.7	952.7	952.7	952.7	952.7	952.7	952.7	952.7	952.7	952.7	952.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3
2.5°	892.1	893.4	894.7	895.2	895.0	894.8	894.7	894.5
5°	889.9	891.6	893.3	894.2	893.9	893.7	893.5	893.2
7.5°	885.0	887.0	889.1	889.9	889.8	889.5	889.3	889.1
10°	880.2	882.2	884.3	885.1	885.0	884.7	884.5	884.3
12.5°	873.5	875.3	877.1	878.0	878.0	877.9	877.9	877.8
15°	861.2	863.2	865.2	866.1	865.9	865.6	865.4	865.2
17.5°	846.2	848.3	850.4	851.3	851.1	850.9	850.7	850.6
20°	834.5	836.8	839.1	840.2	840.2	840.2	840.2	840.2
22.5°	821.0	823.1	825.4	826.7	827.1	827.4	827.7	828.1
25°	799.9	802.4	804.8	806.2	806.3	806.6	806.8	807.1
27.5°	776.3	778.5	780.9	782.1	782.4	782.7	783.0	783.2
30°	759.8	762.2	764.7	766.2	766.7	767.0	767.5	768.0
32.5°	742.9	745.7	748.5	750.2	750.5	751.0	751.5	752.0
35°	716.0	719.2	722.3	724.2	724.8	725.5	726.2	726.9
37.5°	688.1	691.3	694.4	696.4	697.0	697.8	698.4	699.2
40°	668.4	671.8	675.0	677.1	678.1	678.9	679.9	680.7
42.5°	649.0	652.7	656.4	658.6	659.3	660.1	660.8	661.5
45°	619.2	622.9	626.7	629.1	630.3	631.4	632.5	633.6
47.5°	587.5	591.4	595.4	597.9	599.4	600.7	602.0	603.3
50°	565.3	569.8	574.2	577.1	578.4	579.9	581.2	582.5
52.5°	542.9	547.3	551.8	554.7	556.0	557.3	558.6	560.1
55°	509.2	513.7	518.1	521.0	522.4	523.7	525.0	526.3
57.5°	473.8	479.1	484.4	487.7	488.9	490.1	491.4	492.7
60°	449.4	454.5	459.6	463.1	464.9	466.7	468.4	470.2
62.5°	425.3	430.5	435.5	439.0	440.8	442.6	444.3	446.1
65°	388.1	393.7	399.3	402.9	404.7	406.5	408.2	410.0
67.5°	351.6	357.2	362.9	366.6	368.3	370.0	371.8	373.5
70°	325.8	331.9	337.9	341.7	343.2	344.8	346.3	347.9
72.5°	301.4	307.3	313.1	316.9	318.6	320.4	322.1	323.9
75°	264.1	270.3	276.6	280.7	282.8	284.7	286.7	288.7
77.5°	229.4	235.7	242.0	246.3	248.5	250.5	252.7	254.9
80°	206.9	213.6	220.3	224.4	226.2	228.0	229.8	231.6
82.5°	184.7	191.6	198.5	202.9	204.8	206.8	208.8	210.8
85°	153.7	160.4	167.1	171.5	173.8	176.0	178.2	180.5
87.5°	131.0	137.7	144.4	148.7	150.7	152.8	154.8	156.8
90°	130.4	137.8	145.2	150.1	152.1	154.2	156.4	158.4
92.5°	137.3	144.2	151.1	155.5	157.5	159.5	161.5	163.4
95°	156.3	162.8	169.3	173.5	175.5	177.5	179.6	181.5
97.5°	182.5	188.9	195.3	199.4	201.3	203.3	205.2	207.1
100°	201.6	207.9	214.3	218.3	219.8	221.4	222.9	224.5
102.5°	222.3	228.6	234.9	238.9	240.8	242.7	244.6	246.4
105°	253.6	259.8	265.8	269.9	272.2	274.5	276.7	279.1
107.5°	288.7	294.6	300.6	304.3	305.9	307.5	309.1	310.7
110°	312.1	316.9	321.7	325.3	327.5	329.8	332.1	334.3





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	337.1	342.0	346.9	350.3	352.1	354.0	355.9	357.8
115°	376.4	381.2	385.9	388.9	390.3	391.7	393.1	394.5
117.5°	413.4	417.5	421.6	424.3	425.8	427.3	428.7	430.2
120°	438.6	442.2	445.8	448.7	450.8	453.0	455.1	457.1
122.5°	464.6	468.4	472.4	474.9	475.9	476.8	477.9	478.9
125°	503.0	507.0	510.9	513.3	514.3	515.4	516.3	517.4
127.5°	538.6	542.2	545.9	548.5	549.7	550.9	552.2	553.5
130°	564.0	567.8	571.5	573.6	574.3	575.0	575.6	576.4
132.5°	588.2	591.7	595.2	597.5	598.6	599.6	600.7	601.8
135°	623.4	626.7	629.9	632.0	632.7	633.6	634.4	635.3
137.5°	658.4	661.2	664.0	666.0	667.2	668.5	669.7	670.9
140°	681.7	684.5	687.2	689.0	689.9	690.9	691.8	692.8
142.5°	704.4	706.9	709.5	711.1	712.0	712.9	713.9	714.7
145°	739.2	740.4	741.6	742.3	742.7	743.1	743.6	743.9
147.5°	771.0	771.1	771.1	771.4	771.9	772.5	773.1	773.6
150°	792.1	792.1	792.1	792.0	791.9	791.7	791.5	791.4
152.5°	812.4	812.8	813.1	813.1	812.8	812.3	811.9	811.4
155°	840.6	841.2	841.9	841.9	841.2	840.6	839.9	839.3
157.5°	865.4	866.0	866.5	866.4	865.9	865.3	864.8	864.2
160°	880.8	881.3	881.7	881.7	880.8	880.0	879.2	878.4
162.5°	894.6	895.4	896.4	896.4	895.5	894.8	893.9	893.1
165°	912.8	913.7	914.7	914.8	914.2	913.5	912.9	912.3
167.5°	928.0	929.1	930.0	930.0	929.0	927.9	927.0	926.0
170°	936.3	937.3	938.3	938.2	937.1	935.9	934.7	933.6
172.5°	942.4	943.6	944.7	944.7	943.6	942.4	941.2	940.1
175°	949.1	950.3	951.5	951.5	950.3	949.1	948.0	946.9
177.5°	952.8	953.8	954.7	954.6	953.6	952.5	951.5	950.4
180°	952.7	952.7	952.7	952.7	952.7	952.7	952.7	952.7

(END OF REPORT)