

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: P331977-830

Luminaire Tested: **S123DIP-S775D805U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331977-830  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S775D805U830-4F0-1E-UDD-D1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

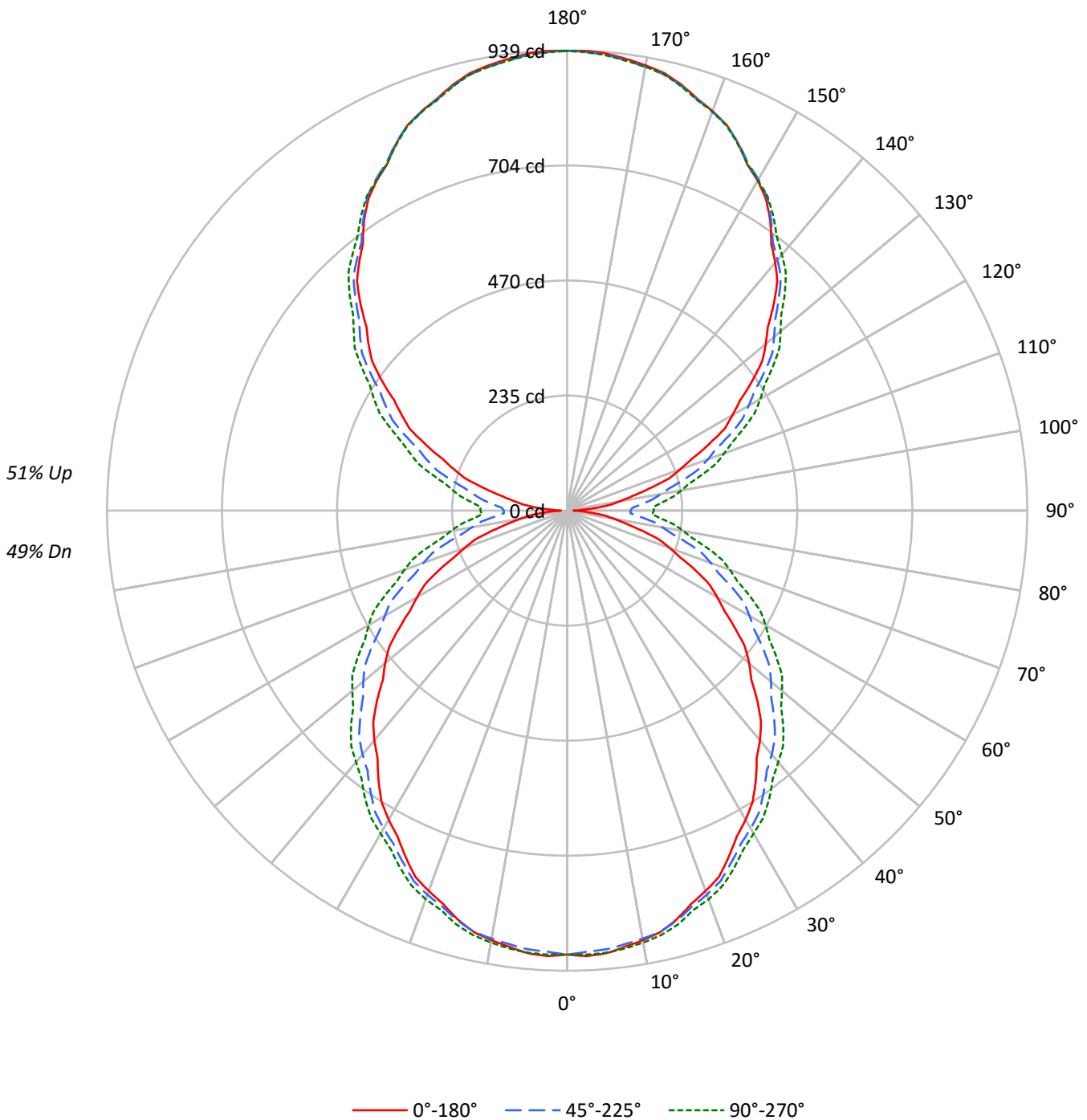
Lumens per Lamp: N/A  
Luminaire Lumens: 5646.4 lumens  
Efficiency: N/A  
Efficacy: 123.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')  
CIE Type: General Diffuse  
  
Input Watts (W): 45.9  
Input Voltage (V): 120  
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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	49
1	97	92	88	84	89	85	81	78	71	68	66	59	57	55	47	46	45	39
2	88	80	73	67	80	73	68	63	62	58	54	51	48	45	41	39	37	32
3	80	70	62	56	73	64	57	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	26	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	27	48	37	30	25	32	26	22	27	22	19	22	18	16	13
9	49	36	29	24	45	34	27	22	29	23	20	24	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	18	23	18	15	19	15	13	11

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

	0°	45°	90°
0°	9752	9752	9752
5°	9782	9507	9512
10°	9694	9287	9240
15°	9570	9038	8945
20°	9390	8755	8621
25°	9171	8428	8278
30°	8945	8133	7931
35°	8692	7823	7655
40°	8450	7540	7358
45°	8182	7269	7122
50°	7918	7000	6860
55°	7627	6725	6625
60°	7343	6446	6385
65°	7051	6149	6098
70°	6611	5815	5805
75°	6055	5432	5506
80°	5416	5056	5164
85°	4828	4799	4966



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.9	1.5
10°-20°	244.8	4.3
20°-30°	366.2	6.5
30°-40°	437.3	7.7
40°-50°	457.5	8.1
50°-60°	429.4	7.6
60°-70°	358.6	6.4
70°-80°	256.6	4.5
80°-90°	155.8	2.8
90°-100°	157.1	2.8
100°-110°	253.5	4.5
110°-120°	358.2	6.3
120°-130°	436.1	7.7
130°-140°	472.0	8.4
140°-150°	454.7	8.1
150°-160°	380.6	6.7
160°-170°	253.4	4.5
170°-180°	88.7	1.6
0°-30°	696.9	12.3
0°-40°	1134.2	20.1
0°-60°	2021.1	35.8
0°-90°	2792.0	49.4
90°-120°	768.8	13.6
90°-150°	2131.7	37.8
90°-180°	2854.0	50.5
0°-180°	5646.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	906	906	906	906	906	
5°	907	905	899	906	906	86
15°	864	866	866	875	874	243
25°	780	789	792	805	805	359
35°	671	687	700	714	718	420
45°	549	572	597	615	624	423
55°	418	451	486	512	521	375
65°	289	328	371	400	411	286
75°	157	203	253	284	297	168
85°	48	98	150	182	193	51
90°	14	70	129	164	177	11
95°	54	99	152	184	196	57
105°	174	200	248	275	286	186
115°	318	333	366	390	398	315
125°	461	465	491	508	512	412
135°	597	600	610	624	628	460
145°	722	723	725	732	733	451
155°	826	826	827	829	825	380
165°	900	898	898	901	897	254
175°	936	933	933	937	932	89
180°	938	938	938	938	938	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0
2.5°	909.9	909.4	908.9	908.3	907.9	906.8	905.5	904.1	902.7	901.3	902.7
5°	907.0	906.5	906.1	905.7	905.2	904.4	903.1	901.7	900.4	899.1	900.9
7.5°	898.1	898.1	898.2	898.3	898.4	897.9	896.5	895.3	894.0	892.8	894.9
10°	890.2	890.6	891.1	891.6	891.9	891.6	890.5	889.5	888.3	887.2	889.5
12.5°	880.7	881.4	881.9	882.6	883.2	883.2	882.4	881.7	880.9	880.1	882.1
15°	863.6	864.2	864.9	865.5	866.2	866.4	866.2	866.0	865.7	865.5	867.7
17.5°	841.9	843.2	844.5	845.7	847.1	847.7	847.6	847.5	847.4	847.3	849.3
20°	826.0	827.4	828.7	830.0	831.3	832.2	832.6	833.1	833.5	834.0	835.9
22.5°	809.5	810.8	812.1	813.4	814.7	815.7	816.3	816.9	817.6	818.1	820.7
25°	779.7	781.8	784.0	786.3	788.4	789.9	790.5	791.2	791.8	792.5	795.3
27.5°	749.7	752.1	754.7	757.1	759.7	761.6	763.0	764.4	765.8	767.2	769.7
30°	728.3	731.2	734.1	736.9	739.7	742.1	743.8	745.6	747.3	749.0	751.7
32.5°	704.6	707.8	711.1	714.3	717.5	720.2	722.5	724.8	727.1	729.3	732.2
35°	671.1	674.6	678.2	681.6	685.1	688.3	691.2	694.0	696.9	699.7	703.0
37.5°	635.6	639.5	643.5	647.4	651.4	655.1	658.6	662.1	665.6	669.1	672.9
40°	611.9	615.9	619.8	623.8	627.6	631.9	636.2	640.6	645.0	649.4	653.1
42.5°	585.8	590.7	595.5	600.3	605.1	609.8	614.3	619.0	623.5	628.1	632.2
45°	548.7	554.0	559.2	564.5	569.8	575.1	580.6	586.1	591.6	597.1	601.2
47.5°	509.8	515.9	521.8	527.7	533.7	539.8	546.1	552.3	558.6	564.9	569.6
50°	484.6	490.7	496.8	503.0	509.2	515.6	522.5	529.2	536.0	542.8	547.8
52.5°	457.7	464.2	470.7	477.2	483.7	490.7	498.2	505.7	513.2	520.7	525.9
55°	418.5	425.7	432.9	440.2	447.4	455.0	462.9	470.8	478.6	486.5	492.5
57.5°	380.1	387.7	395.2	402.7	410.4	418.4	427.1	435.7	444.3	453.0	458.9
60°	353.4	361.2	369.1	377.0	384.9	393.3	402.4	411.3	420.3	429.3	435.5
62.5°	328.0	336.1	344.2	352.2	360.3	369.1	378.6	388.1	397.7	407.2	413.3
65°	289.2	297.7	306.2	314.8	323.4	332.4	342.1	351.8	361.5	371.1	377.7
67.5°	249.7	258.7	267.9	276.9	286.0	295.5	305.3	315.1	324.9	334.8	342.0
70°	222.1	231.5	240.9	250.3	259.8	269.8	280.3	290.8	301.3	311.9	318.9
72.5°	196.8	206.2	215.7	225.1	234.5	244.7	255.5	266.5	277.3	288.1	295.4
75°	156.9	167.2	177.6	187.8	198.1	208.8	219.7	230.7	241.7	252.7	259.9
77.5°	122.2	132.6	143.0	153.4	163.7	174.5	185.6	196.6	207.6	218.7	226.3
80°	97.7	108.5	119.2	130.0	140.7	151.7	163.2	174.6	186.0	197.4	204.8
82.5°	76.3	87.3	98.2	109.1	120.1	131.3	142.9	154.5	166.1	177.7	185.1
85°	48.4	59.3	70.3	81.2	92.2	103.5	115.2	126.8	138.4	150.1	157.5
87.5°	26.4	37.6	48.9	60.1	71.4	82.8	94.4	106.0	117.6	129.3	136.9
90°	13.6	25.9	38.4	50.7	63.1	76.0	89.3	102.5	115.9	129.2	137.3
92.5°	29.9	40.7	51.5	62.3	73.1	84.6	96.8	109.1	121.3	133.5	141.3
95°	54.3	64.0	73.7	83.4	93.1	104.1	116.0	128.1	140.2	152.2	159.7
97.5°	86.9	95.5	104.1	112.6	121.2	131.1	142.3	153.5	164.8	176.0	183.2
100°	109.1	117.1	125.1	133.1	141.1	150.5	161.5	172.4	183.3	194.2	201.0
102.5°	134.9	141.8	148.6	155.5	162.5	171.4	182.4	193.4	204.4	215.4	222.1
105°	173.7	179.3	184.9	190.5	196.0	204.3	215.2	226.1	237.0	247.9	254.1
107.5°	217.9	222.6	227.2	232.0	236.6	243.7	253.3	262.8	272.3	281.8	288.2
110°	245.4	249.7	254.0	258.3	262.5	269.2	278.3	287.4	296.5	305.6	312.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	274.9	278.3	281.8	285.2	288.7	294.6	303.1	311.6	320.1	328.6	334.9
115°	318.1	321.2	324.3	327.5	330.6	335.9	343.6	351.1	358.6	366.3	371.6
117.5°	362.4	364.4	366.4	368.3	370.2	374.8	381.7	388.7	395.7	402.7	407.8
120°	389.4	391.4	393.5	395.6	397.7	401.9	408.3	414.7	421.2	427.6	432.4
122.5°	418.2	419.5	420.8	422.1	423.4	427.3	433.8	440.2	446.7	453.1	457.6
125°	461.3	461.8	462.3	462.8	463.3	466.6	472.6	478.6	484.7	490.7	494.6
127.5°	502.0	502.8	503.7	504.4	505.3	508.2	513.1	518.0	522.9	527.8	531.2
130°	529.1	530.2	531.3	532.3	533.5	536.0	539.9	543.8	547.6	551.6	555.1
132.5°	555.4	556.8	558.0	559.2	560.5	562.7	565.9	569.0	572.1	575.3	578.5
135°	596.6	597.5	598.2	599.0	599.7	601.2	603.5	605.7	607.9	610.2	613.5
137.5°	634.8	635.5	636.1	636.7	637.3	638.6	640.4	642.2	643.9	645.7	648.5
140°	660.5	661.4	662.1	663.0	663.8	664.6	665.4	666.3	667.1	667.9	671.0
142.5°	684.7	685.3	686.0	686.6	687.3	687.8	688.2	688.6	689.1	689.5	692.3
145°	722.5	722.6	722.6	722.7	722.8	723.1	723.7	724.2	724.6	725.1	726.7
147.5°	754.5	755.1	755.6	756.2	756.9	757.3	757.8	758.3	758.7	759.2	759.7
150°	777.4	777.8	778.1	778.4	778.7	779.1	779.4	779.8	780.0	780.4	780.4
152.5°	796.4	796.7	797.2	797.7	798.1	798.5	798.7	798.9	799.1	799.3	799.6
155°	826.0	826.0	826.0	826.0	826.0	826.1	826.3	826.5	826.7	826.8	827.5
157.5°	851.4	851.2	851.0	850.8	850.6	850.6	850.7	850.9	851.0	851.1	851.9
160°	867.3	867.0	866.7	866.4	866.0	865.9	865.9	865.9	865.9	865.9	866.7
162.5°	881.5	881.1	880.6	880.1	879.7	879.5	879.7	879.8	879.9	880.1	880.8
165°	899.8	899.3	898.8	898.3	897.8	897.6	897.6	897.6	897.6	897.6	898.5
167.5°	914.4	913.7	913.0	912.4	911.7	911.5	911.6	911.7	911.9	912.0	913.0
170°	922.7	922.0	921.3	920.7	920.0	919.6	919.6	919.6	919.6	919.6	920.9
172.5°	929.1	928.5	927.8	927.2	926.5	926.1	926.1	926.1	926.1	926.1	927.2
175°	935.9	935.2	934.6	934.0	933.3	932.9	932.9	932.9	932.9	932.9	934.0
177.5°	938.7	938.2	937.6	937.1	936.6	936.3	936.3	936.3	936.3	936.3	937.1
180°	938.1	938.1	938.1	938.1	938.1	938.1	938.1	938.1	938.1	938.1	938.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0
2.5°	904.1	905.5	906.8	907.5	907.3	907.1	906.9	906.8
5°	902.6	904.4	906.1	906.8	906.6	906.4	906.3	906.0
7.5°	897.1	899.4	901.5	902.5	902.2	902.0	901.7	901.4
10°	891.6	893.8	896.0	896.9	896.5	896.0	895.6	895.1
12.5°	884.2	886.2	888.2	889.0	888.5	888.2	887.7	887.2
15°	869.9	872.1	874.3	875.2	875.1	874.9	874.6	874.4
17.5°	851.3	853.3	855.3	856.1	855.8	855.5	855.2	854.9
20°	837.9	839.9	841.9	842.9	843.2	843.4	843.6	843.9
22.5°	823.1	825.7	828.1	829.3	829.2	829.1	829.0	828.8
25°	798.2	801.1	803.9	805.3	805.3	805.3	805.3	805.3
27.5°	772.1	774.6	777.0	778.4	778.5	778.7	778.9	779.1
30°	754.3	757.0	759.6	760.9	760.9	760.9	760.9	760.9
32.5°	734.9	737.7	740.6	742.3	742.7	743.3	743.8	744.3
35°	706.3	709.6	712.8	715.0	715.9	716.7	717.6	718.5
37.5°	676.6	680.3	684.0	686.3	686.9	687.7	688.3	689.1
40°	656.9	660.5	664.3	666.6	667.5	668.4	669.2	670.1
42.5°	636.2	640.3	644.4	647.1	648.3	649.5	650.7	652.0
45°	605.4	609.5	613.8	616.7	618.5	620.2	622.0	623.8
47.5°	574.3	579.0	583.7	586.7	588.1	589.5	590.8	592.1
50°	552.9	557.9	563.0	566.3	567.8	569.3	570.9	572.4
52.5°	531.1	536.4	541.6	545.2	547.1	548.9	550.8	552.7
55°	498.4	504.4	510.2	514.1	515.9	517.6	519.3	521.1
57.5°	465.0	470.9	476.8	480.9	483.0	485.0	487.0	489.1
60°	441.6	447.7	453.8	458.2	460.5	463.0	465.4	467.8
62.5°	419.5	425.7	431.8	435.9	438.2	440.5	442.7	444.9
65°	384.3	390.8	397.4	401.8	404.0	406.1	408.4	410.6
67.5°	349.1	356.4	363.5	368.1	369.9	371.7	373.6	375.4
70°	325.9	332.9	340.0	344.5	346.8	348.9	351.1	353.4
72.5°	302.6	309.7	317.0	321.7	323.9	326.0	328.2	330.5
75°	267.1	274.4	281.6	286.5	289.2	291.8	294.5	297.1
77.5°	233.9	241.6	249.2	254.0	256.1	258.1	260.1	262.1
80°	212.3	219.7	227.2	232.1	234.2	236.4	238.7	240.8
82.5°	192.6	200.0	207.5	212.3	214.5	216.7	218.9	221.0
85°	164.9	172.4	179.8	184.6	186.8	189.1	191.2	193.4
87.5°	144.5	152.0	159.7	164.6	166.8	169.1	171.4	173.6
90°	145.4	153.5	161.6	166.9	169.5	172.0	174.6	177.0
92.5°	149.1	156.9	164.8	169.6	171.4	173.1	175.0	176.8
95°	167.1	174.6	182.0	186.9	189.1	191.2	193.4	195.7
97.5°	190.5	197.8	205.1	209.8	211.9	214.1	216.2	218.3
100°	207.9	214.7	221.6	226.3	228.8	231.3	233.8	236.4
102.5°	228.8	235.4	242.1	246.5	248.6	250.7	252.9	255.1
105°	260.2	266.4	272.5	276.7	279.0	281.3	283.6	286.0
107.5°	294.6	301.0	307.5	311.5	313.3	315.0	316.7	318.5
110°	318.3	324.7	331.0	334.9	336.4	337.8	339.2	340.6





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	341.2	347.5	353.8	357.9	359.8	361.7	363.5	365.4
115°	377.1	382.5	388.0	391.4	393.0	394.6	396.2	397.8
117.5°	413.0	418.2	423.4	426.6	427.9	429.1	430.4	431.6
120°	437.3	442.2	447.1	450.2	451.4	452.6	453.7	455.0
122.5°	462.0	466.5	470.9	473.6	474.8	475.8	476.9	478.0
125°	498.6	502.6	506.5	508.9	509.8	510.7	511.5	512.5
127.5°	534.6	538.1	541.5	543.6	544.3	545.1	545.8	546.5
130°	558.6	562.1	565.6	567.4	567.6	567.8	568.0	568.2
132.5°	581.7	584.9	588.1	590.0	590.7	591.3	591.8	592.5
135°	616.8	620.1	623.4	625.4	626.2	627.0	627.7	628.5
137.5°	651.3	654.0	656.9	658.5	658.9	659.4	659.9	660.3
140°	674.2	677.3	680.4	681.9	681.9	681.8	681.8	681.7
142.5°	695.0	697.9	700.6	702.1	702.3	702.6	702.8	702.9
145°	728.3	729.9	731.5	732.4	732.6	732.8	733.1	733.3
147.5°	760.3	760.7	761.3	761.5	761.3	761.1	760.9	760.6
150°	780.4	780.4	780.4	780.1	779.6	779.0	778.5	778.0
152.5°	799.7	800.0	800.3	800.0	799.3	798.5	797.8	797.0
155°	828.1	828.8	829.4	829.2	828.0	826.9	825.8	824.6
157.5°	852.5	853.2	853.8	853.8	852.9	852.0	851.0	850.1
160°	867.5	868.4	869.1	869.2	868.6	867.9	867.2	866.6
162.5°	881.7	882.5	883.4	883.2	882.1	881.1	880.1	879.0
165°	899.6	900.5	901.5	901.4	900.3	899.1	898.0	896.8
167.5°	914.1	915.0	916.1	916.1	915.0	914.1	913.0	912.0
170°	922.0	923.1	924.3	924.3	923.1	922.0	920.9	919.6
172.5°	928.2	929.3	930.2	930.2	929.0	927.8	926.7	925.6
175°	934.9	935.9	936.9	936.8	935.7	934.5	933.3	932.2
177.5°	937.9	938.7	939.4	939.4	938.5	937.5	936.7	935.8
180°	938.1	938.1	938.1	938.1	938.1	938.1	938.1	938.1

(END OF REPORT)