

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: P333186-830

Luminaire Tested: **S125DIP-S610D810U830-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333186-830  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-19,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIP-S610D810U830-4F0-1E-UDD-F4  
Description: DEFINE 5 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 610 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 810 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5098.7 lumens  
Efficiency: N/A  
Efficacy: 132.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31  
Luminous Opening: Rectangular (W 0.42' x L: 4' x H: 0')  
CIE Type: General Diffuse

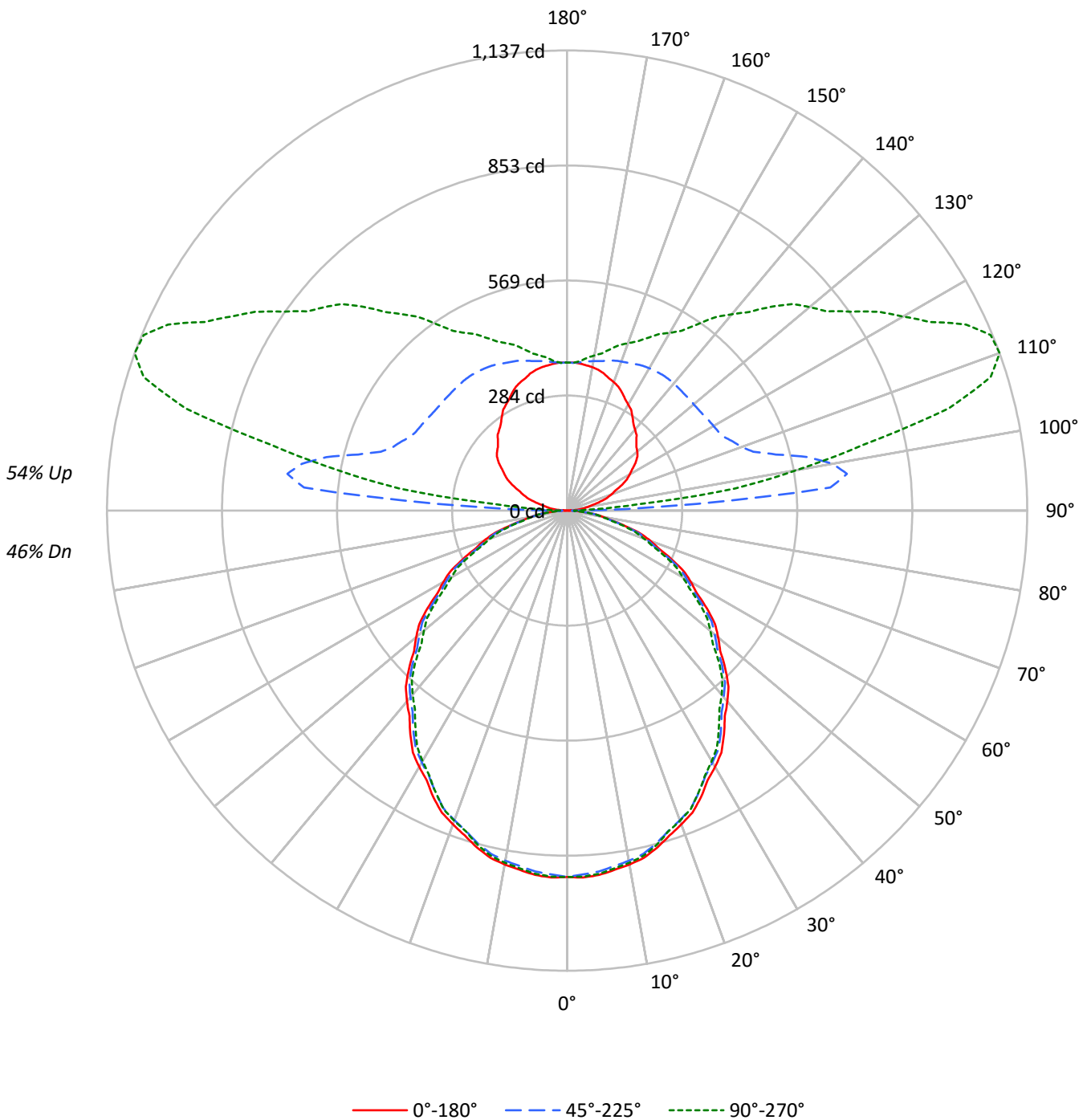
Input Watts (W): 38.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	50	30	10	0		
RCR																										
0	106	106	106	106	98	98	98	98	81	81	81	66	66	66	53	53	53	46					46			
1	97	93	89	85	89	85	82	79	71	69	67	58	57	55	46	45	44	39					39			
2	88	81	75	69	81	74	69	65	62	58	55	51	48	46	41	39	37	32					32			
3	80	71	64	58	73	65	59	54	55	50	46	45	42	39	36	34	32	27					27			
4	74	63	55	49	67	58	51	46	49	43	39	40	36	33	32	30	27	24					24			
5	67	56	48	42	62	52	44	39	44	38	34	36	32	29	29	26	24	20					20			
6	62	50	42	36	57	46	39	34	39	34	30	33	28	25	26	23	21	18					18			
7	57	45	37	32	53	42	35	30	36	30	26	30	25	22	24	21	19	16					16			
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	17	14					14			
9	50	37	30	25	45	35	28	23	30	24	21	25	21	18	20	17	15	13					13			
10	46	34	27	22	42	32	25	21	27	22	19	23	19	16	19	16	14	12					12			

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

	0°	45°	90°
0°	5846	5846	5846
5°	5859	5803	5841
10°	5823	5762	5795
15°	5760	5693	5717
20°	5670	5597	5606
25°	5573	5481	5476
30°	5452	5357	5330
35°	5324	5222	5149
40°	5193	5078	5005
45°	5050	4945	4847
50°	4893	4786	4641
55°	4741	4604	4476
60°	4561	4421	4265
65°	4345	4202	4060
70°	4137	3950	3814
75°	3770	3646	3521
80°	3355	3303	3221
85°	2920	2971	2816



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.3	1.7
10°-20°	241.1	4.7
20°-30°	356.0	7.0
30°-40°	415.4	8.1
40°-50°	417.2	8.2
50°-60°	366.2	7.2
60°-70°	272.9	5.4
70°-80°	156.0	3.1
80°-90°	47.4	0.9
90°-100°	264.9	5.2
100°-110°	569.6	11.2
110°-120°	534.5	10.5
120°-130°	433.2	8.5
130°-140°	347.7	6.8
140°-150°	262.4	5.1
150°-160°	184.7	3.6
160°-170°	108.8	2.1
170°-180°	35.4	0.7
0°-30°	682.4	13.4
0°-40°	1097.8	21.5
0°-60°	1881.2	36.9
0°-90°	2357.5	46.2
90°-120°	1369.1	26.9
90°-150°	2412.3	47.3
90°-180°	2741.0	53.8
0°-180°	5098.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	905	905	905	905	905	
5°	904	902	895	901	901	86
15°	862	859	852	855	855	243
25°	782	778	769	770	768	360
35°	675	672	662	659	653	422
45°	553	550	541	533	531	426
55°	421	418	409	403	398	376
65°	284	282	275	269	266	282
75°	151	150	146	144	141	161
85°	39	40	40	39	38	44
90°	1	7	12	15	17	4
95°	24	72	653	296	173	26
105°	83	116	534	1052	976	88
115°	149	179	429	925	1088	146
125°	206	242	411	736	857	183
135°	242	291	408	616	712	188
145°	282	322	410	510	562	176
155°	321	346	399	451	471	148
165°	351	360	383	406	413	99
175°	365	365	368	372	371	35
180°	366	366	366	366	366	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	905.2	905.2	905.2	905.2	905.2	905.2	905.2	905.2	905.2	905.2	905.2
2.5°	907.5	907.1	906.7	906.3	906.0	905.1	903.9	902.6	901.4	900.0	901.4
5°	903.8	903.4	903.1	902.8	902.5	901.5	899.9	898.3	896.7	895.1	896.6
7.5°	895.4	895.1	894.8	894.5	894.2	893.2	891.4	889.7	887.9	886.2	887.5
10°	888.0	887.7	887.4	887.0	886.7	885.7	883.9	882.2	880.4	878.7	880.0
12.5°	878.8	878.3	877.7	877.1	876.6	875.4	873.8	872.2	870.5	868.9	870.0
15°	861.5	861.0	860.5	860.1	859.6	858.5	856.8	855.0	853.2	851.5	852.2
17.5°	841.6	840.9	840.2	839.5	838.8	837.5	835.8	833.9	832.1	830.3	831.2
20°	825.0	824.6	824.3	824.1	823.7	822.6	820.5	818.4	816.3	814.3	815.4
22.5°	808.3	807.8	807.2	806.6	806.1	804.8	802.9	801.0	799.0	797.0	797.8
25°	782.0	781.2	780.4	779.7	778.8	777.4	775.3	773.3	771.2	769.1	769.5
27.5°	751.2	750.7	750.3	749.8	749.3	748.0	745.8	743.8	741.6	739.5	739.5
30°	731.1	730.7	730.2	729.7	729.2	727.8	725.5	723.0	720.7	718.3	717.9
32.5°	709.4	708.7	707.9	707.2	706.4	705.0	702.9	700.8	698.6	696.5	696.0
35°	675.3	674.7	674.0	673.4	672.8	671.4	669.1	666.8	664.7	662.4	661.7
37.5°	639.9	639.1	638.4	637.5	636.8	635.3	633.2	631.1	629.0	626.9	625.8
40°	615.9	615.1	614.3	613.5	612.7	611.1	609.0	606.7	604.5	602.3	600.9
42.5°	590.1	589.5	588.7	588.1	587.4	586.0	583.7	581.5	579.3	577.0	575.8
45°	552.9	552.2	551.6	550.9	550.4	549.0	547.1	545.3	543.3	541.4	539.5
47.5°	512.7	512.7	512.8	512.8	512.8	511.7	509.4	507.2	504.9	502.6	500.7
50°	487.0	486.4	486.0	485.5	485.0	483.9	481.9	480.0	478.2	476.3	474.2
52.5°	460.6	460.2	460.0	459.6	459.2	458.0	456.0	453.9	451.9	449.9	448.1
55°	421.1	420.6	420.1	419.6	419.1	417.8	415.6	413.4	411.1	408.9	407.5
57.5°	379.4	379.2	378.9	378.6	378.4	377.3	375.4	373.5	371.6	369.9	368.0
60°	353.1	352.4	351.8	351.1	350.5	349.3	347.6	345.8	344.0	342.3	340.7
62.5°	325.6	325.1	324.5	324.0	323.5	322.5	321.0	319.5	318.0	316.5	314.8
65°	284.3	284.0	283.7	283.3	283.0	282.0	280.2	278.5	276.7	275.0	273.5
67.5°	244.3	243.6	243.0	242.3	241.7	240.7	239.4	238.1	236.8	235.4	234.2
70°	219.1	218.4	217.5	216.8	215.9	214.8	213.4	212.0	210.6	209.2	208.1
72.5°	191.6	191.1	190.6	190.0	189.5	188.7	187.8	186.9	186.0	185.0	184.0
75°	151.1	150.8	150.4	150.1	149.9	149.3	148.5	147.7	146.8	146.1	145.6
77.5°	113.8	113.6	113.5	113.3	113.2	112.9	112.4	112.1	111.6	111.1	110.8
80°	90.2	90.2	90.2	90.2	90.2	90.1	89.7	89.4	89.2	88.8	88.6
82.5°	69.7	69.4	69.1	68.8	68.6	68.4	68.3	68.3	68.2	68.1	67.9
85°	39.4	39.6	39.7	39.9	40.1	40.1	40.1	40.1	40.1	40.1	40.0
87.5°	15.6	15.7	16.0	16.3	16.7	16.9	16.9	17.1	17.1	17.2	17.4
90°	0.8	1.5	2.9	4.4	5.9	7.4	8.1	9.6	10.3	11.8	12.5
92.5°	9.0	10.9	17.1	26.2	38.9	60.4	100.7	168.1	241.4	237.6	192.4
95°	24.3	25.1	30.9	39.0	55.2	88.4	167.3	329.4	532.8	653.0	638.9
97.5°	40.3	41.3	45.4	53.5	68.1	92.0	144.1	263.0	475.8	697.3	808.4
100°	51.6	53.1	56.0	64.1	78.1	100.2	143.0	238.7	424.5	665.5	849.7
102.5°	64.0	64.8	67.2	75.9	88.7	110.3	148.3	228.8	385.6	609.4	825.0
105°	83.3	83.3	87.0	94.3	106.1	126.8	159.2	224.8	347.9	534.3	745.8
107.5°	102.2	103.6	107.2	113.2	125.5	144.0	175.4	231.6	332.0	482.6	665.1
110°	115.7	117.2	120.1	126.8	137.8	156.9	187.2	238.1	327.3	458.4	619.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	129.2	130.7	133.1	139.7	150.8	169.4	198.4	246.3	327.3	444.2	584.8
115°	148.8	150.3	152.6	159.2	170.2	188.7	215.9	258.6	329.4	429.0	547.5
117.5°	166.5	168.8	171.2	177.8	190.3	208.1	233.9	272.9	334.3	421.4	525.3
120°	178.3	180.6	183.5	190.1	202.6	221.1	246.9	282.3	339.0	417.8	512.9
122.5°	190.8	192.4	194.7	201.3	215.1	233.5	259.3	292.8	343.1	414.9	502.3
125°	206.3	207.8	211.5	218.1	232.1	251.3	275.6	307.3	350.1	411.2	487.9
127.5°	218.6	220.8	225.6	233.9	248.8	268.0	291.4	320.6	357.9	409.4	474.6
130°	226.2	228.5	234.3	243.9	259.4	278.6	301.4	329.4	362.6	408.3	465.8
132.5°	232.1	235.0	242.0	252.8	268.8	288.0	310.9	337.1	367.9	408.3	458.7
135°	241.8	244.7	253.5	265.3	280.8	300.7	323.6	347.9	375.1	408.3	450.3
137.5°	253.8	256.0	264.3	276.1	291.2	311.7	332.5	355.8	381.7	409.2	442.8
140°	260.9	263.1	271.9	283.7	297.7	317.6	339.0	361.1	384.7	409.7	439.2
142.5°	269.1	270.8	279.0	290.8	304.3	322.9	343.1	364.1	386.4	410.4	436.3
145°	281.5	283.0	290.4	300.7	314.0	330.9	350.1	368.4	388.4	409.7	431.9
147.5°	294.5	295.4	301.7	311.3	322.8	337.7	354.5	371.2	389.1	407.8	427.3
150°	302.2	303.6	308.8	318.4	328.7	341.2	357.4	372.9	389.1	406.0	423.8
152.5°	310.4	311.3	315.8	324.2	334.0	345.3	360.3	374.1	388.5	403.7	419.6
155°	321.3	321.3	325.7	333.1	340.4	350.8	363.4	375.1	386.9	399.4	412.7
157.5°	331.0	330.9	334.4	340.7	347.2	355.1	365.8	375.9	385.0	395.0	406.2
160°	337.5	336.8	339.8	344.9	350.8	357.4	367.0	375.9	383.2	392.1	401.0
162.5°	342.8	342.1	345.1	349.6	354.3	359.8	368.2	375.2	381.4	388.5	396.2
165°	350.8	349.3	351.6	355.2	358.2	362.6	368.4	374.4	378.8	383.2	389.1
167.5°	356.1	355.3	356.7	358.7	360.8	363.6	368.4	372.6	374.7	378.1	382.2
170°	359.7	358.9	359.7	361.1	362.6	364.8	368.4	371.5	372.9	375.1	378.1
172.5°	362.0	360.7	361.4	362.9	363.7	364.8	367.9	370.2	370.5	371.6	373.9
175°	364.8	363.4	364.1	364.8	364.8	364.8	367.0	368.4	367.8	367.8	368.4
177.5°	366.1	365.0	365.0	365.5	365.0	365.0	366.1	366.7	365.5	365.5	366.1
180°	365.5	365.5	365.5	365.5	365.5	365.5	365.5	365.5	365.5	365.5	365.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	905.2	905.2	905.2	905.2	905.2	905.2	905.2	905.2
2.5°	902.6	903.9	905.1	905.7	905.6	905.4	905.3	905.2
5°	898.1	899.5	900.9	901.5	901.4	901.3	901.1	900.9
7.5°	888.9	890.3	891.7	892.4	892.2	892.0	891.9	891.7
10°	881.3	882.5	883.8	884.4	884.2	884.0	883.8	883.7
12.5°	871.0	872.0	873.0	873.5	873.5	873.5	873.5	873.4
15°	853.1	853.8	854.7	855.1	855.1	855.1	855.1	855.1
17.5°	832.3	833.2	834.2	834.3	833.5	832.7	832.0	831.1
20°	816.4	817.6	818.7	818.9	818.0	817.3	816.4	815.7
22.5°	798.5	799.3	800.0	800.1	799.6	799.0	798.4	798.0
25°	769.8	770.1	770.4	770.3	769.9	769.4	768.9	768.5
27.5°	739.6	739.7	739.7	739.5	739.0	738.6	738.1	737.6
30°	717.7	717.4	717.0	716.6	716.1	715.7	715.2	714.7
32.5°	695.4	694.7	694.2	693.5	692.7	691.8	690.9	690.0
35°	660.8	660.1	659.2	658.2	657.0	655.6	654.4	653.1
37.5°	624.5	623.4	622.2	621.2	620.5	619.8	619.1	618.3
40°	599.4	597.9	596.5	595.6	595.1	594.7	594.2	593.7
42.5°	574.5	573.2	571.8	570.8	570.0	569.4	568.6	567.9
45°	537.5	535.6	533.8	532.5	532.1	531.6	531.1	530.7
47.5°	498.7	496.7	494.8	493.3	492.2	491.1	489.9	488.8
50°	472.1	470.0	468.0	466.4	465.2	464.1	463.0	461.9
52.5°	446.2	444.4	442.6	441.1	439.9	438.6	437.3	436.1
55°	406.0	404.6	403.2	401.9	400.8	399.6	398.6	397.5
57.5°	366.1	364.3	362.4	361.2	360.6	360.0	359.4	358.8
60°	339.1	337.5	335.9	334.6	333.5	332.3	331.2	330.2
62.5°	313.1	311.4	309.6	308.4	307.6	306.6	305.8	304.9
65°	272.1	270.7	269.3	268.2	267.6	266.9	266.4	265.7
67.5°	233.1	231.9	230.6	229.8	229.4	229.0	228.7	228.3
70°	207.2	206.2	205.3	204.5	203.9	203.2	202.6	202.0
72.5°	182.9	181.8	180.7	179.8	179.2	178.6	178.0	177.3
75°	145.2	144.7	144.2	143.6	143.0	142.3	141.8	141.1
77.5°	110.6	110.3	110.0	109.6	109.1	108.8	108.3	107.8
80°	88.5	88.3	88.1	87.9	87.6	87.3	87.0	86.6
82.5°	67.6	67.3	67.0	66.8	66.8	66.7	66.6	66.6
85°	39.8	39.6	39.5	39.2	38.9	38.5	38.3	38.0
87.5°	17.5	17.7	17.8	18.0	17.7	17.5	17.4	17.2
90°	13.3	14.0	14.7	16.2	16.2	16.2	17.0	17.0
92.5°	130.6	94.8	71.4	60.4	51.0	49.2	48.2	47.0
95°	529.9	417.8	327.3	265.3	213.0	190.9	185.0	173.1
97.5°	789.2	710.6	622.3	536.2	490.7	449.4	428.0	418.6
100°	906.4	870.3	794.5	717.8	666.9	613.9	586.6	574.9
102.5°	945.9	968.3	931.8	880.0	825.6	787.8	758.2	749.3
105°	922.7	1023.7	1056.1	1048.0	1024.4	1000.0	985.3	976.5
107.5°	839.5	974.3	1057.5	1096.0	1108.0	1107.8	1103.0	1097.0
110°	778.3	918.2	1022.2	1084.8	1117.9	1132.0	1137.2	1137.2





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	729.9	862.8	967.9	1041.8	1090.2	1114.3	1127.1	1132.5
115°	669.2	783.4	884.4	964.7	1022.2	1057.5	1078.2	1087.8
117.5°	630.0	728.4	815.4	889.1	946.6	983.1	1003.6	1009.5
120°	608.7	697.2	778.3	843.1	897.6	933.0	952.9	958.8
122.5°	592.9	674.8	747.0	807.8	856.4	888.8	908.7	914.0
125°	569.7	644.9	709.0	762.0	803.3	833.5	849.7	857.1
127.5°	546.1	616.2	676.1	725.8	763.2	789.9	805.2	808.4
130°	531.3	596.3	653.7	701.6	738.5	762.8	777.5	781.9
132.5°	516.6	577.3	629.5	675.6	712.5	736.8	750.4	755.4
135°	497.5	548.3	595.5	637.4	669.9	694.2	707.5	711.9
137.5°	481.3	522.4	561.6	597.2	626.3	648.4	660.6	665.5
140°	472.4	507.0	540.9	571.8	599.2	618.3	629.3	633.0
142.5°	464.8	494.1	523.2	550.1	573.3	589.5	599.9	602.9
145°	454.7	477.6	500.4	520.3	538.0	550.5	558.6	561.6
147.5°	445.3	463.8	481.4	496.4	510.4	520.5	525.2	526.5
150°	440.0	456.2	470.1	483.4	494.6	503.3	506.3	507.0
152.5°	434.0	448.6	461.4	471.6	481.0	488.0	491.0	491.7
155°	425.3	437.1	447.3	455.4	462.8	468.0	470.1	470.9
157.5°	416.4	426.1	434.0	440.5	446.2	450.4	452.5	452.3
160°	410.5	417.8	425.3	430.4	435.5	439.2	440.7	440.0
162.5°	404.0	410.8	417.0	421.5	425.6	428.6	429.0	428.8
165°	395.0	400.2	404.6	408.3	411.2	412.7	412.7	412.7
167.5°	386.4	389.8	393.2	395.9	397.4	398.7	398.1	397.9
170°	381.7	384.0	386.2	387.7	389.1	389.8	389.8	389.1
172.5°	376.5	378.6	380.3	381.2	381.4	382.8	381.6	380.9
175°	370.7	370.7	372.2	372.2	372.2	372.9	371.5	370.7
177.5°	366.7	367.3	367.3	367.3	366.7	367.3	365.5	365.5
180°	365.5	365.5	365.5	365.5	365.5	365.5	365.5	365.5

(END OF REPORT)