

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: P332561-830

Luminaire Tested: **S124DIP-S575D810U830-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332561-830
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: S124DIP-S575D810U830-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 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: 5079.3 lumens
Efficiency: N/A
Efficacy: 132.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

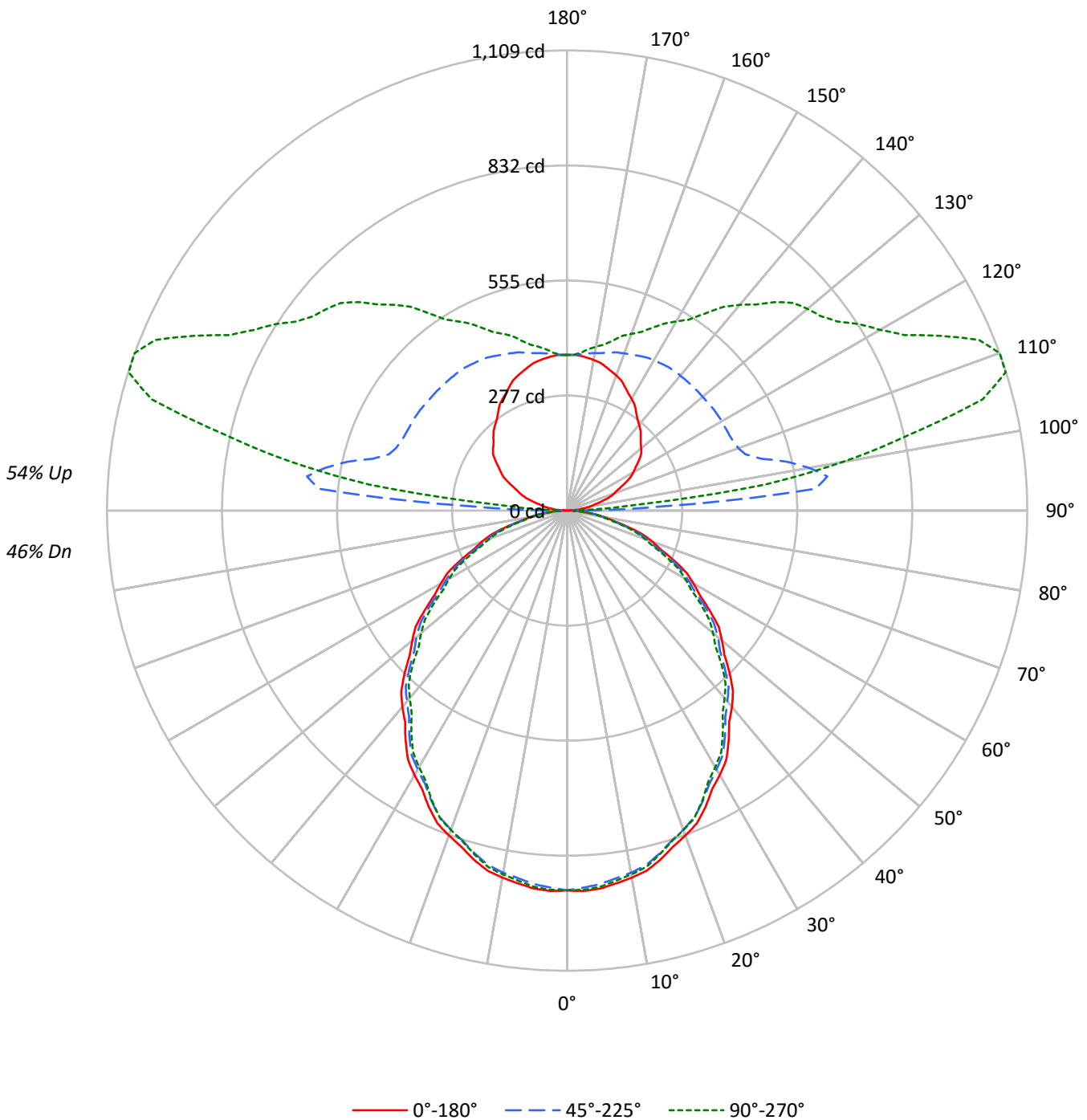
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	97	93	89	85	89	85	82	79	71	69	67	58	57	55	47	45	44	39				
2	88	81	75	70	81	74	69	65	62	58	55	51	48	46	41	39	37	33				
3	80	71	64	58	74	65	59	54	55	50	46	45	42	39	36	34	32	28				
4	74	63	55	49	67	58	51	46	49	44	39	40	36	33	32	30	27	24				
5	68	56	48	42	62	52	45	39	44	38	34	36	32	29	29	26	24	21				
6	62	50	42	36	57	46	39	34	39	34	30	33	28	25	26	23	21	18				
7	57	45	37	32	53	42	35	30	36	30	26	30	25	22	24	21	19	16				
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	17	14				
9	50	37	30	25	46	35	28	24	30	24	21	25	21	18	20	17	15	13				
10	46	34	27	22	43	32	25	21	27	22	19	23	19	16	19	16	14	12				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7389	7389	7389
5°	7412	7323	7376
10°	7365	7263	7299
15°	7276	7160	7178
20°	7158	7032	7039
25°	7023	6886	6866
30°	6858	6715	6652
35°	6686	6535	6447
40°	6509	6330	6215
45°	6322	6130	6012
50°	6116	5951	5766
55°	5895	5719	5533
60°	5672	5459	5293
65°	5421	5213	5001
70°	5141	4881	4692
75°	4713	4482	4370
80°	4193	4021	3924
85°	3668	3538	3464



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.2	1.7
10°-20°	242.9	4.8
20°-30°	357.5	7.0
30°-40°	415.6	8.2
40°-50°	415.6	8.2
50°-60°	363.5	7.2
60°-70°	270.0	5.3
70°-80°	153.4	3.0
80°-90°	46.3	0.9
90°-100°	270.9	5.3
100°-110°	563.9	11.1
110°-120°	505.1	9.9
120°-130°	424.9	8.4
130°-140°	354.3	7.0
140°-150°	270.6	5.3
150°-160°	190.2	3.7
160°-170°	111.9	2.2
170°-180°	36.4	0.7
0°-30°	686.6	13.5
0°-40°	1102.1	21.7
0°-60°	1881.3	37.0
0°-90°	2351.0	46.3
90°-120°	1340.0	26.4
90°-150°	2389.7	47.0
90°-180°	2728.0	53.7
0°-180°	5079.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	915	915	915	915	915	
5°	915	911	904	911	910	87
15°	871	867	857	861	859	245
25°	788	783	773	774	771	363
35°	678	673	663	658	654	424
45°	554	548	537	529	527	427
55°	419	416	406	398	393	375
65°	284	280	273	266	262	281
75°	151	147	144	141	140	161
85°	40	40	38	38	37	44
90°	1	6	13	15	16	3
95°	24	77	601	297	180	27
105°	86	125	483	1041	1037	92
115°	152	191	431	828	996	151
125°	212	251	429	705	794	188
135°	251	299	425	626	710	194
145°	290	332	423	528	580	182
155°	329	356	411	466	486	152
165°	359	370	394	418	424	101
175°	374	375	378	383	382	36
180°	375	375	375	375	375	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3
2.5°	917.7	917.3	916.9	916.5	916.2	915.2	913.8	912.4	910.9	909.5	910.8
5°	914.6	914.0	913.3	912.7	912.0	910.8	909.0	907.2	905.4	903.6	905.4
7.5°	906.1	905.4	904.8	904.2	903.5	902.2	900.2	898.2	896.2	894.2	895.7
10°	898.4	897.9	897.2	896.5	895.9	894.5	892.4	890.2	888.2	886.0	887.3
12.5°	888.5	887.9	887.2	886.6	885.9	884.5	882.2	880.0	877.7	875.4	876.8
15°	870.6	870.0	869.3	868.6	868.0	866.5	864.0	861.6	859.1	856.7	857.6
17.5°	849.0	848.2	847.4	846.6	845.7	844.2	841.9	839.6	837.3	835.0	835.6
20°	833.2	832.4	831.6	830.8	829.9	828.3	825.9	823.4	821.0	818.5	819.0
22.5°	816.1	815.1	814.1	812.9	811.9	810.1	807.7	805.2	802.8	800.3	801.3
25°	788.4	787.3	786.2	785.0	783.9	782.2	779.9	777.6	775.3	773.1	773.3
27.5°	756.8	755.6	754.4	753.3	752.1	750.5	748.3	746.2	744.0	742.0	741.6
30°	735.7	734.3	733.0	731.7	730.5	728.7	726.6	724.4	722.4	720.3	719.6
32.5°	713.3	712.2	711.0	709.8	708.7	706.9	704.7	702.5	700.2	698.0	697.2
35°	678.4	677.3	676.2	675.0	673.9	672.1	669.9	667.6	665.3	663.1	661.9
37.5°	641.6	640.6	639.5	638.5	637.4	635.7	633.3	630.8	628.4	625.9	624.7
40°	617.6	616.2	614.9	613.7	612.4	610.5	608.0	605.6	603.1	600.7	599.1
42.5°	591.7	591.0	590.2	589.4	588.6	586.8	584.2	581.5	578.7	576.1	574.2
45°	553.7	552.6	551.5	550.4	549.2	547.3	544.7	542.1	539.5	536.9	535.1
47.5°	514.0	513.2	512.5	511.6	510.9	509.3	506.9	504.4	502.0	499.6	497.6
50°	487.0	486.4	485.7	485.0	484.4	483.0	480.7	478.3	476.1	473.8	471.6
52.5°	460.6	459.9	459.0	458.3	457.5	455.9	453.5	451.1	448.7	446.2	444.2
55°	418.8	418.3	417.8	417.4	416.9	415.5	413.2	410.9	408.6	406.3	404.4
57.5°	378.9	378.3	377.8	377.2	376.6	375.3	373.1	370.8	368.5	366.3	364.4
60°	351.3	350.5	349.7	348.8	348.1	346.6	344.5	342.3	340.3	338.1	336.7
62.5°	324.3	323.7	322.9	322.3	321.6	320.1	317.9	315.7	313.4	311.1	309.8
65°	283.8	283.0	282.2	281.4	280.6	279.4	277.8	276.1	274.5	272.9	271.2
67.5°	243.1	242.3	241.6	240.8	240.1	238.9	237.3	235.8	234.2	232.6	231.1
70°	217.8	216.7	215.6	214.4	213.3	212.1	210.8	209.4	208.1	206.8	205.6
72.5°	190.9	189.7	188.6	187.4	186.2	185.2	184.2	183.1	182.1	181.0	179.9
75°	151.1	150.2	149.5	148.6	147.8	147.0	146.2	145.3	144.6	143.7	143.1
77.5°	113.1	112.7	112.4	112.1	111.7	111.1	110.4	109.7	109.0	108.3	108.0
80°	90.2	89.7	89.3	88.8	88.2	87.8	87.6	87.2	86.9	86.5	86.2
82.5°	68.0	67.7	67.5	67.2	67.0	66.8	66.8	66.7	66.6	66.6	66.4
85°	39.6	39.6	39.6	39.6	39.6	39.4	39.1	38.8	38.5	38.2	38.2
87.5°	15.4	15.6	15.8	15.9	15.9	15.7	16.5	16.4	16.6	16.8	16.6
90°	0.8	2.2	4.4	5.2	5.9	5.9	10.3	10.3	11.8	13.3	12.5
92.5°	8.4	12.3	19.1	28.2	38.9	54.2	91.7	148.8	204.6	233.8	194.7
95°	24.3	26.5	33.9	43.5	61.2	92.1	156.3	277.1	453.3	600.7	617.6
97.5°	43.6	43.6	50.0	58.8	74.0	99.9	149.3	249.1	424.2	632.6	775.9
100°	56.0	56.0	61.2	70.0	84.0	107.6	151.1	234.4	384.7	592.6	781.2
102.5°	67.8	69.0	73.5	81.8	95.2	117.6	156.9	230.3	358.2	542.4	737.0
105°	86.2	88.4	92.1	100.9	114.2	135.6	171.0	232.1	335.4	483.4	656.7
107.5°	106.6	108.0	111.7	121.1	133.8	155.0	187.4	243.1	331.2	450.4	591.8
110°	120.2	121.6	125.3	134.1	147.4	167.3	199.7	251.3	332.3	439.2	559.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	133.1	134.6	138.8	147.1	160.3	180.3	211.5	260.1	335.9	433.9	541.1
115°	151.8	154.0	159.2	166.5	180.6	200.5	230.0	274.2	342.7	431.1	524.0
117.5°	171.3	173.3	178.0	186.1	199.2	219.8	247.8	288.4	350.0	430.4	516.3
120°	184.3	185.7	190.9	199.0	211.5	232.1	260.1	298.5	355.2	430.4	512.2
122.5°	196.0	197.6	202.6	210.2	223.9	243.9	271.9	307.9	360.5	429.8	507.5
125°	211.5	214.4	218.9	227.0	241.0	261.6	288.1	322.1	368.5	429.0	499.6
127.5°	225.3	227.6	232.9	242.1	256.7	277.6	303.2	334.3	374.8	427.3	489.2
130°	232.9	235.8	241.8	252.8	266.8	288.1	313.2	342.0	379.6	426.7	482.8
132.5°	240.5	242.9	250.6	261.1	276.3	296.4	321.5	349.6	383.7	426.1	476.8
135°	251.3	254.3	261.6	274.2	289.6	308.8	333.1	359.7	389.8	425.3	468.0
137.5°	262.1	264.9	273.0	284.9	301.0	319.2	342.0	366.7	393.5	425.1	460.3
140°	269.8	271.9	280.0	292.6	308.0	325.7	347.9	371.5	396.5	424.5	456.2
142.5°	278.0	280.2	287.8	299.6	314.5	331.7	353.2	374.9	398.9	424.5	452.7
145°	289.6	291.8	299.3	309.5	323.6	339.8	358.9	378.8	400.2	423.0	446.6
147.5°	302.7	303.5	310.0	320.6	332.2	346.9	364.9	382.2	401.0	420.4	441.2
150°	311.0	311.8	317.6	326.5	337.5	351.6	367.8	384.0	401.0	418.6	437.1
152.5°	318.7	318.9	324.7	333.0	342.9	355.7	370.1	385.1	399.7	415.7	432.3
155°	329.4	330.2	334.6	342.0	350.1	361.1	373.6	386.2	397.9	411.2	425.3
157.5°	339.9	339.9	344.0	349.8	356.8	365.5	376.2	386.2	396.1	406.7	418.0
160°	346.4	346.4	349.3	354.5	360.4	368.5	377.3	386.2	394.3	403.1	412.7
162.5°	352.3	351.7	354.0	358.6	363.9	370.2	378.5	386.2	392.6	399.6	408.0
165°	358.9	358.9	360.4	364.1	367.8	372.2	378.8	384.7	389.2	394.3	400.2
167.5°	365.5	364.9	365.5	368.3	370.4	373.8	378.7	383.0	385.6	389.0	393.1
170°	368.5	367.8	368.5	370.7	372.2	374.4	378.1	381.7	383.2	385.4	388.4
172.5°	371.5	370.7	370.9	372.5	373.3	374.9	377.5	380.6	380.9	381.9	384.3
175°	374.4	373.6	373.6	374.4	375.1	375.1	376.6	378.8	378.1	378.1	379.6
177.5°	375.7	375.1	374.6	375.1	375.1	375.1	375.7	376.9	375.7	375.7	376.3
180°	375.1	375.1	375.1	375.1	375.1	375.1	375.1	375.1	375.1	375.1	375.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3
2.5°	912.1	913.4	914.7	915.3	915.1	915.0	914.9	914.7
5°	907.2	909.0	910.8	911.5	911.2	910.9	910.5	910.2
7.5°	897.1	898.5	899.9	900.6	900.4	900.2	900.0	899.8
10°	888.6	889.9	891.3	891.7	891.4	891.1	890.7	890.4
12.5°	878.4	879.8	881.2	881.7	881.2	880.7	880.3	879.9
15°	858.7	859.6	860.5	860.8	860.4	859.9	859.3	858.8
17.5°	836.2	836.8	837.4	837.5	837.3	836.9	836.6	836.3
20°	819.5	820.0	820.5	820.6	820.2	819.9	819.6	819.3
22.5°	802.1	803.0	803.9	804.0	803.4	802.9	802.3	801.6
25°	773.4	773.5	773.7	773.5	772.8	772.1	771.5	770.8
27.5°	741.2	740.7	740.4	739.8	739.0	738.2	737.4	736.5
30°	719.0	718.3	717.7	716.9	716.0	715.3	714.4	713.6
32.5°	696.4	695.6	694.8	694.0	693.2	692.4	691.5	690.8
35°	660.7	659.6	658.5	657.5	656.7	655.8	655.1	654.2
37.5°	623.5	622.2	620.9	619.8	618.8	617.6	616.6	615.5
40°	597.5	595.8	594.2	593.0	592.1	591.4	590.5	589.7
42.5°	572.3	570.3	568.4	567.2	566.8	566.2	565.6	565.1
45°	533.3	531.5	529.7	528.6	528.1	527.6	527.1	526.6
47.5°	495.6	493.5	491.5	489.9	488.7	487.4	486.2	484.9
50°	469.2	466.9	464.7	463.1	462.0	461.1	460.1	459.1
52.5°	442.1	440.2	438.2	436.5	435.3	434.0	432.8	431.6
55°	402.5	400.5	398.5	397.0	396.1	395.1	394.1	393.1
57.5°	362.6	360.7	358.8	357.4	356.5	355.5	354.6	353.6
60°	335.2	333.8	332.2	331.1	330.3	329.5	328.7	327.8
62.5°	308.5	307.1	305.8	304.7	303.9	303.1	302.3	301.4
65°	269.6	268.0	266.4	265.1	264.3	263.4	262.7	261.8
67.5°	229.5	228.0	226.4	225.5	225.3	225.1	224.8	224.6
70°	204.2	202.9	201.6	200.8	200.2	199.7	199.3	198.8
72.5°	178.9	177.9	176.8	176.1	175.6	175.1	174.7	174.1
75°	142.4	141.8	141.2	140.7	140.5	140.4	140.3	140.1
77.5°	107.8	107.6	107.4	107.2	106.7	106.3	105.8	105.5
80°	85.9	85.6	85.2	85.0	84.8	84.6	84.5	84.4
82.5°	66.2	66.0	65.8	65.6	65.5	65.3	65.1	64.9
85°	38.2	38.2	38.2	38.1	37.9	37.7	37.6	37.4
87.5°	16.8	16.9	17.1	17.1	17.2	17.3	17.2	17.2
90°	13.3	14.0	14.7	14.7	15.5	16.2	15.5	15.5
92.5°	144.8	109.0	86.7	71.9	63.2	59.3	56.7	56.7
95°	546.1	431.9	333.1	261.6	225.6	202.6	189.5	179.8
97.5°	806.8	764.4	692.3	615.4	562.5	518.1	496.0	480.7
100°	888.8	903.5	867.4	812.9	748.8	703.8	681.7	675.8
102.5°	884.7	957.8	968.3	945.6	906.3	873.6	850.4	845.6
105°	825.5	952.9	1025.9	1056.1	1057.6	1051.7	1041.4	1037.0
107.5°	741.3	877.0	979.8	1045.5	1081.9	1098.7	1106.1	1108.0
110°	690.6	818.0	924.9	1006.0	1058.3	1089.3	1102.6	1109.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	653.5	766.2	867.1	948.2	1007.6	1045.1	1063.7	1074.4
115°	616.1	706.8	793.0	863.7	922.0	966.2	989.8	995.7
117.5°	597.9	672.9	740.6	800.7	850.4	887.5	911.3	916.0
120°	589.6	658.2	717.1	769.4	811.4	843.9	863.0	871.1
122.5°	582.5	648.7	702.4	748.2	783.7	811.4	827.6	835.8
125°	570.4	633.9	684.7	725.2	754.7	776.1	790.0	794.5
127.5°	555.7	616.2	666.9	705.5	735.1	754.1	765.9	770.3
130°	543.9	602.1	652.2	691.3	721.5	740.0	751.8	756.2
132.5°	531.5	586.2	635.2	674.2	703.8	724.6	735.8	740.3
135°	514.4	562.3	607.3	644.1	673.6	694.3	706.1	710.5
137.5°	499.0	539.5	577.4	610.7	638.2	658.6	668.3	673.6
140°	490.1	524.7	557.9	588.9	614.6	630.8	641.2	647.1
142.5°	481.8	512.4	540.8	567.6	590.5	605.5	614.6	618.8
145°	470.2	495.3	517.4	538.0	556.5	568.9	576.4	580.0
147.5°	460.6	480.5	498.2	514.4	528.0	538.8	544.3	545.6
150°	454.7	471.6	486.4	499.6	511.5	521.0	525.5	526.2
152.5°	448.3	462.8	476.4	487.3	497.3	505.1	507.7	508.5
155°	438.5	450.3	461.4	470.2	477.6	483.4	485.7	485.7
157.5°	428.0	437.9	447.2	454.3	459.9	464.3	465.6	465.6
160°	421.6	429.7	437.8	443.7	448.1	452.5	453.3	453.3
162.5°	415.1	422.0	428.4	433.7	436.9	441.3	442.1	441.5
165°	406.0	410.5	415.7	419.3	422.3	425.3	424.5	423.8
167.5°	397.4	400.8	404.9	407.1	408.6	410.5	410.4	409.7
170°	392.1	394.3	397.3	399.4	401.0	401.6	401.0	401.0
172.5°	387.4	389.0	390.8	392.4	393.2	394.0	393.2	392.1
175°	381.1	381.7	383.2	383.2	383.2	384.7	383.2	381.7
177.5°	376.9	377.5	377.5	378.1	377.5	378.1	376.9	375.7
180°	375.1	375.1	375.1	375.1	375.1	375.1	375.1	375.1

(END OF REPORT)