

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: P332579-927

Luminaire Tested: **S124DIP-S575D1205U927-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332579-927  
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-S575D1205U927-4F0-1E-UDD-F4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1205 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5384.4 lumens  
Efficiency: N/A  
Efficacy: 109.0 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: Semi-Indirect

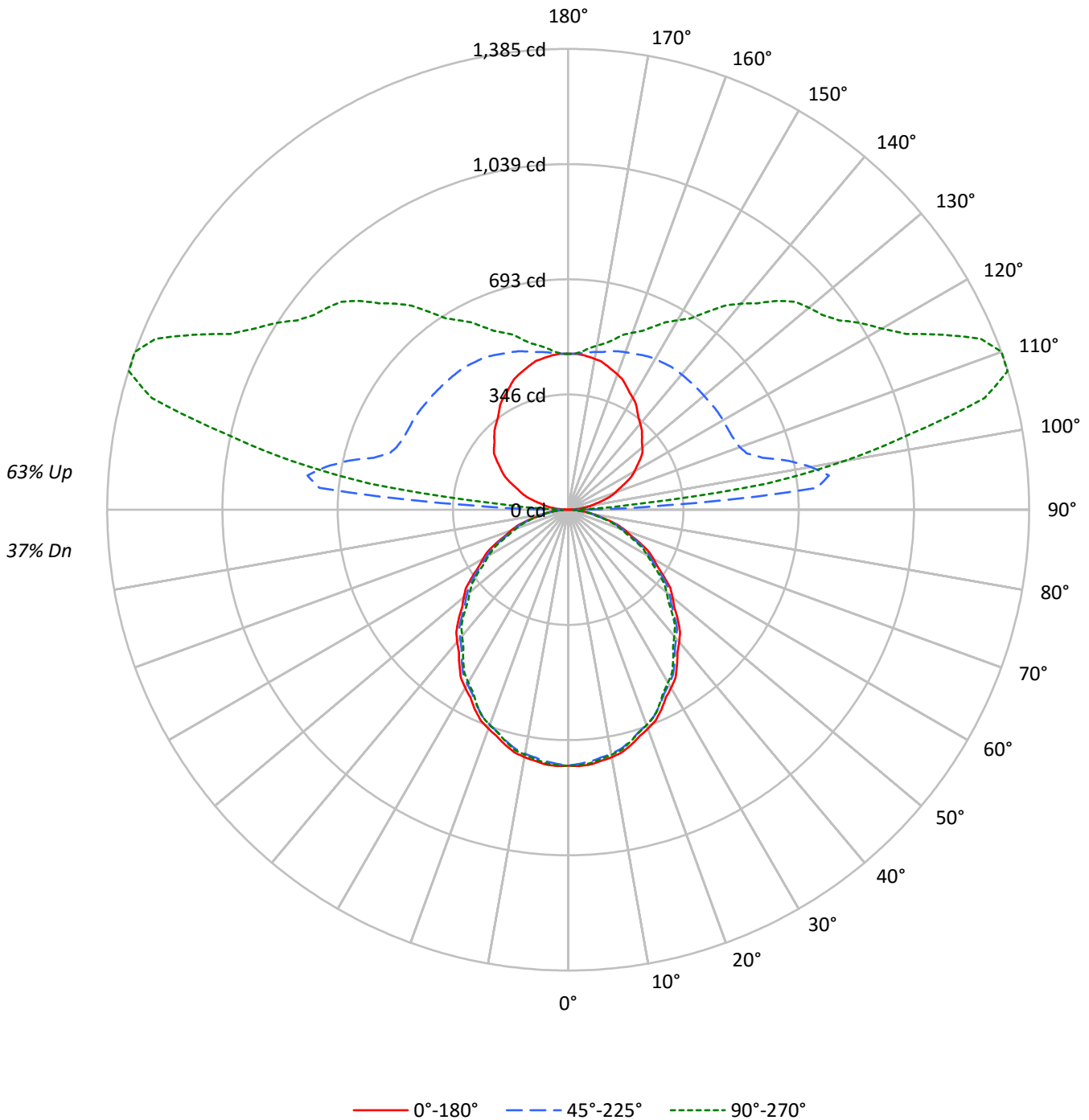
Input Watts (W): 49.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																				
0	104	104	104	104	94	94	94	94	76	76	76		59	59	59		44	44	44	37
1	95	91	87	83	86	82	79	76	66	64	62		52	51	49		39	38	37	31
2	86	79	73	68	78	72	67	62	58	55	51		46	43	41		34	33	31	26
3	79	69	62	57	71	63	57	52	51	47	43		40	37	35		30	28	26	22
4	72	61	54	48	65	56	49	44	46	41	37		36	32	30		27	25	23	19
5	66	55	47	41	59	50	43	38	41	36	32		32	29	26		24	22	20	16
6	61	49	41	35	55	45	38	33	37	31	27		29	25	22		22	19	17	14
7	56	44	36	31	51	40	33	29	33	28	24		26	23	20		20	17	15	13
8	52	40	32	27	47	37	30	25	30	25	21		24	20	18		18	16	14	11
9	48	36	29	24	44	33	27	22	28	23	19		22	18	16		17	14	12	10
10	45	33	26	21	41	31	24	20	25	20	17		20	17	14		16	13	11	9

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

	0°	45°	90°
0°	6211	6211	6211
5°	6229	6155	6199
10°	6190	6105	6135
15°	6115	6018	6033
20°	6016	5910	5916
25°	5903	5787	5770
30°	5764	5643	5591
35°	5619	5492	5419
40°	5469	5321	5223
45°	5313	5151	5053
50°	5141	5001	4847
55°	4954	4807	4650
60°	4766	4589	4448
65°	4556	4380	4204
70°	4322	4102	3944
75°	3961	3768	3671
80°	3524	3380	3296
85°	3084	2973	2908



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.5	1.3
10°-20°	204.1	3.8
20°-30°	300.5	5.6
30°-40°	349.3	6.5
40°-50°	349.3	6.5
50°-60°	305.5	5.7
60°-70°	226.9	4.2
70°-80°	128.9	2.4
80°-90°	39.8	0.7
90°-100°	338.4	6.3
100°-110°	704.3	13.1
110°-120°	630.9	11.7
120°-130°	530.7	9.9
130°-140°	442.5	8.2
140°-150°	338.0	6.3
150°-160°	237.6	4.4
160°-170°	139.8	2.6
170°-180°	45.5	0.8
0°-30°	577.0	10.7
0°-40°	926.3	17.2
0°-60°	1581.2	29.4
0°-90°	1976.8	36.7
90°-120°	1673.6	31.1
90°-150°	2984.8	55.4
90°-180°	3408.0	63.3
0°-180°	5384.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	769	769	769	769	769	
5°	769	766	760	766	765	73
15°	732	729	720	723	722	206
25°	663	658	650	650	648	305
35°	570	566	557	553	550	356
45°	465	461	451	445	443	359
55°	352	350	342	334	330	315
65°	238	235	229	223	220	236
75°	127	124	121	118	118	135
85°	33	33	32	32	31	37
90°	1	7	17	18	19	3
95°	30	96	750	371	225	34
105°	108	156	604	1300	1295	115
115°	190	238	538	1035	1244	188
125°	264	314	536	880	992	235
135°	314	374	531	782	887	243
145°	362	414	528	659	724	227
155°	412	444	514	582	607	190
165°	448	462	492	522	529	127
175°	468	469	472	479	477	44
180°	469	469	469	469	469	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3
2.5°	771.3	771.0	770.6	770.3	770.0	769.2	768.0	766.8	765.6	764.4	765.5
5°	768.7	768.2	767.6	767.1	766.5	765.5	764.0	762.5	761.0	759.5	761.0
7.5°	761.5	761.0	760.5	759.9	759.4	758.3	756.6	754.9	753.2	751.5	752.8
10°	755.1	754.6	754.1	753.5	753.0	751.8	750.0	748.2	746.5	744.7	745.8
12.5°	746.8	746.2	745.7	745.1	744.6	743.4	741.5	739.6	737.7	735.8	737.0
15°	731.7	731.2	730.6	730.1	729.5	728.3	726.2	724.1	722.1	720.0	720.8
17.5°	713.6	712.9	712.3	711.5	710.8	709.6	707.6	705.7	703.7	701.8	702.3
20°	700.3	699.6	698.9	698.2	697.5	696.2	694.1	692.1	690.0	687.9	688.3
22.5°	686.0	685.1	684.2	683.3	682.4	680.9	678.8	676.8	674.7	672.6	673.4
25°	662.7	661.7	660.8	659.8	658.9	657.4	655.5	653.6	651.6	649.7	649.9
27.5°	636.0	635.1	634.1	633.1	632.1	630.7	628.9	627.2	625.3	623.6	623.3
30°	618.3	617.2	616.1	615.0	613.9	612.4	610.7	608.9	607.1	605.4	604.8
32.5°	599.5	598.6	597.5	596.6	595.6	594.1	592.3	590.4	588.5	586.6	586.0
35°	570.2	569.3	568.3	567.4	566.4	564.9	563.0	561.1	559.2	557.3	556.3
37.5°	539.2	538.4	537.5	536.6	535.8	534.3	532.3	530.2	528.1	526.1	525.1
40°	519.0	517.9	516.8	515.8	514.7	513.1	511.0	509.0	506.9	504.9	503.5
42.5°	497.3	496.7	496.1	495.4	494.7	493.2	491.0	488.7	486.4	484.2	482.6
45°	465.4	464.5	463.5	462.6	461.6	460.0	457.8	455.6	453.4	451.2	449.7
47.5°	432.0	431.3	430.7	430.0	429.4	428.0	426.0	424.0	421.9	419.9	418.2
50°	409.3	408.8	408.2	407.7	407.1	405.9	404.0	402.0	400.1	398.2	396.3
52.5°	387.1	386.5	385.8	385.2	384.5	383.2	381.1	379.1	377.1	375.0	373.4
55°	352.0	351.6	351.2	350.8	350.4	349.2	347.3	345.3	343.4	341.5	339.8
57.5°	318.5	318.0	317.5	317.0	316.6	315.4	313.5	311.6	309.7	307.8	306.3
60°	295.2	294.6	293.9	293.2	292.6	291.3	289.5	287.7	286.0	284.2	283.0
62.5°	272.6	272.0	271.4	270.8	270.3	269.0	267.2	265.3	263.4	261.5	260.4
65°	238.5	237.9	237.2	236.5	235.8	234.8	233.5	232.0	230.7	229.3	227.9
67.5°	204.3	203.7	203.0	202.4	201.8	200.8	199.5	198.2	196.9	195.5	194.2
70°	183.1	182.1	181.2	180.2	179.3	178.2	177.1	176.0	174.9	173.8	172.8
72.5°	160.4	159.5	158.5	157.5	156.5	155.7	154.8	153.9	153.0	152.1	151.2
75°	127.0	126.3	125.6	124.9	124.2	123.6	122.9	122.2	121.5	120.8	120.3
77.5°	95.1	94.7	94.4	94.2	93.9	93.4	92.8	92.2	91.6	91.0	90.8
80°	75.8	75.4	75.0	74.6	74.1	73.8	73.6	73.3	73.0	72.7	72.5
82.5°	57.1	56.9	56.7	56.5	56.3	56.2	56.2	56.1	56.0	56.0	55.8
85°	33.3	33.3	33.3	33.3	33.3	33.1	32.9	32.6	32.3	32.1	32.1
87.5°	13.0	13.2	13.7	13.8	13.9	13.8	14.7	14.7	14.9	15.1	15.0
90°	1.0	2.8	5.5	6.4	7.4	7.4	12.9	12.9	14.7	16.6	15.7
92.5°	10.5	15.3	23.9	35.2	48.6	67.7	114.5	185.9	255.6	292.0	243.2
95°	30.3	33.1	42.4	54.3	76.4	115.1	195.1	346.1	566.1	750.2	771.4
97.5°	54.5	54.5	62.4	73.4	92.4	124.8	186.5	311.2	529.8	790.2	969.2
100°	69.9	69.9	76.4	87.5	105.0	134.4	188.7	292.7	480.5	740.1	975.7
102.5°	84.7	86.2	91.9	102.2	118.9	146.9	196.1	287.6	447.3	677.5	920.5
105°	107.7	110.4	115.1	126.1	142.7	169.4	213.6	289.9	418.8	603.9	820.1
107.5°	133.1	134.9	139.6	151.3	167.2	193.5	234.0	303.6	413.7	562.6	739.2
110°	150.0	151.9	156.5	167.5	184.1	209.0	249.5	313.9	415.2	548.7	698.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	166.3	168.1	173.4	183.7	200.3	225.1	264.2	325.0	419.5	542.0	675.8
115°	189.6	192.4	198.8	208.0	225.5	250.4	287.2	342.5	428.0	538.5	654.5
117.5°	213.9	216.5	222.2	232.3	248.7	274.5	309.5	360.3	437.0	537.6	644.9
120°	230.1	232.0	238.4	248.5	264.2	289.9	325.0	372.8	443.7	537.6	639.8
122.5°	244.9	246.7	253.2	262.5	279.6	304.7	339.7	384.6	450.4	536.9	633.9
125°	264.2	267.8	273.4	283.5	301.0	326.8	359.9	402.3	460.3	535.8	624.1
127.5°	281.3	284.2	290.9	302.5	320.7	346.7	378.7	417.6	468.2	533.7	611.0
130°	290.9	294.5	301.9	315.8	333.2	359.9	391.3	427.1	474.0	533.0	602.9
132.5°	300.5	303.4	313.0	326.1	345.0	370.3	401.6	436.7	479.2	532.3	595.6
135°	313.9	317.6	326.8	342.5	361.8	385.7	416.1	449.2	487.0	531.2	584.6
137.5°	327.3	330.8	341.0	355.8	376.0	398.8	427.1	458.0	491.5	530.9	575.0
140°	336.9	339.7	349.8	365.4	384.8	406.9	434.5	463.9	495.3	530.2	569.8
142.5°	347.2	350.0	359.3	374.3	392.8	414.2	441.1	468.3	498.2	530.2	565.4
145°	361.8	364.6	373.8	386.6	404.1	424.4	448.3	473.2	499.9	528.4	557.9
147.5°	378.1	379.1	387.1	400.4	414.9	433.2	455.7	477.4	500.7	525.1	551.0
150°	388.5	389.4	396.7	407.8	421.6	439.1	459.3	479.6	500.7	522.8	545.9
152.5°	398.0	398.2	405.6	415.9	428.3	444.3	462.3	481.1	499.3	519.2	540.0
155°	411.5	412.4	417.9	427.1	437.3	451.1	466.7	482.4	497.1	513.7	531.2
157.5°	424.5	424.5	429.7	436.9	445.7	456.6	469.8	482.4	494.7	507.9	522.1
160°	432.6	432.6	436.3	442.8	450.1	460.3	471.3	482.4	492.5	503.5	515.5
162.5°	440.0	439.3	442.2	447.9	454.6	462.5	472.8	482.4	490.3	499.1	509.6
165°	448.3	448.3	450.1	454.7	459.3	464.9	473.2	480.5	486.0	492.5	499.9
167.5°	456.6	455.7	456.6	460.1	462.6	466.9	472.9	478.3	481.6	485.8	491.0
170°	460.3	459.3	460.3	463.0	464.9	467.6	472.2	476.8	478.6	481.4	485.1
172.5°	463.9	463.0	463.2	465.2	466.4	468.3	471.5	475.4	475.7	477.0	480.0
175°	467.6	466.7	466.7	467.6	468.6	468.6	470.4	473.2	472.2	472.2	474.0
177.5°	469.3	468.6	467.8	468.6	468.6	468.6	469.3	470.7	469.3	469.3	470.0
180°	468.6	468.6	468.6	468.6	468.6	468.6	468.6	468.6	468.6	468.6	468.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3
2.5°	766.6	767.7	768.8	769.3	769.1	769.1	769.0	768.8
5°	762.5	764.0	765.5	766.1	765.8	765.6	765.2	765.0
7.5°	754.0	755.2	756.4	756.9	756.8	756.6	756.5	756.2
10°	746.9	748.0	749.1	749.5	749.2	748.9	748.6	748.4
12.5°	738.2	739.4	740.6	741.0	740.6	740.2	739.9	739.5
15°	721.7	722.5	723.3	723.5	723.1	722.7	722.2	721.8
17.5°	702.8	703.3	703.9	703.9	703.7	703.4	703.1	702.9
20°	688.8	689.2	689.6	689.7	689.4	689.1	688.9	688.6
22.5°	674.1	674.9	675.7	675.7	675.3	674.8	674.3	673.8
25°	650.0	650.1	650.3	650.1	649.5	649.0	648.4	647.8
27.5°	623.0	622.6	622.3	621.8	621.1	620.4	619.7	619.0
30°	604.3	603.7	603.2	602.5	601.8	601.2	600.5	599.8
32.5°	585.3	584.6	584.0	583.3	582.7	581.9	581.2	580.6
35°	555.3	554.4	553.4	552.6	551.9	551.2	550.6	549.9
37.5°	524.0	522.9	521.9	520.9	520.1	519.1	518.2	517.3
40°	502.2	500.7	499.4	498.4	497.6	497.0	496.3	495.6
42.5°	481.0	479.3	477.8	476.7	476.3	475.9	475.4	474.9
45°	448.2	446.7	445.2	444.3	443.9	443.5	443.0	442.6
47.5°	416.5	414.8	413.1	411.8	410.7	409.6	408.6	407.6
50°	394.3	392.4	390.5	389.2	388.3	387.5	386.7	385.9
52.5°	371.6	369.9	368.3	366.9	365.8	364.8	363.8	362.7
55°	338.3	336.6	334.9	333.7	332.9	332.1	331.2	330.4
57.5°	304.8	303.2	301.6	300.4	299.6	298.8	298.0	297.2
60°	281.7	280.5	279.2	278.3	277.6	276.9	276.2	275.5
62.5°	259.3	258.1	257.0	256.1	255.4	254.8	254.1	253.3
65°	226.6	225.2	223.9	222.8	222.1	221.4	220.8	220.1
67.5°	192.9	191.6	190.3	189.5	189.3	189.2	188.9	188.8
70°	171.7	170.6	169.4	168.7	168.3	167.9	167.5	167.1
72.5°	150.4	149.5	148.6	148.0	147.6	147.2	146.8	146.3
75°	119.7	119.1	118.7	118.3	118.1	118.0	117.9	117.7
77.5°	90.6	90.5	90.3	90.1	89.7	89.4	89.0	88.6
80°	72.2	71.9	71.6	71.5	71.3	71.1	71.1	70.9
82.5°	55.6	55.5	55.3	55.1	55.1	54.9	54.7	54.6
85°	32.1	32.1	32.1	32.0	31.8	31.7	31.6	31.4
87.5°	15.1	15.4	15.5	15.5	15.7	15.9	15.7	15.7
90°	16.6	17.5	18.4	18.4	19.3	20.3	19.3	19.3
92.5°	180.8	136.0	108.3	89.8	79.0	74.0	70.9	70.9
95°	682.1	539.4	416.1	326.8	281.7	253.2	236.5	224.6
97.5°	1007.8	954.7	864.7	768.7	702.5	647.1	619.5	600.4
100°	1110.2	1128.5	1083.5	1015.3	935.3	879.1	851.5	844.1
102.5°	1105.0	1196.3	1209.3	1181.0	1131.9	1091.2	1062.1	1056.2
105°	1030.9	1190.3	1281.4	1319.1	1321.0	1313.6	1300.7	1295.1
107.5°	925.8	1095.4	1223.8	1305.8	1351.3	1372.3	1381.5	1383.9
110°	862.5	1021.8	1155.2	1256.5	1321.8	1360.5	1377.1	1385.4





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	816.1	957.0	1083.1	1184.3	1258.5	1305.3	1328.5	1342.0
115°	769.5	882.8	990.5	1078.9	1151.6	1206.8	1236.3	1243.6
117.5°	746.7	840.4	925.1	1000.1	1062.1	1108.5	1138.3	1144.0
120°	736.4	822.0	895.6	961.0	1013.5	1054.0	1077.9	1088.1
122.5°	727.5	810.2	877.3	934.5	978.9	1013.5	1033.7	1043.9
125°	712.5	791.6	855.2	905.8	942.6	969.3	986.8	992.3
127.5°	694.0	769.8	833.1	881.1	918.1	941.9	956.6	962.1
130°	679.4	752.1	814.7	863.5	901.2	924.2	938.9	944.4
132.5°	663.8	732.2	793.3	842.1	879.1	905.1	919.0	924.6
135°	642.5	702.3	758.5	804.5	841.4	867.1	881.9	887.4
137.5°	623.2	673.8	721.1	762.7	797.2	822.6	834.7	841.4
140°	612.1	655.4	696.8	735.5	767.7	788.0	800.8	808.2
142.5°	601.8	639.9	675.5	709.0	737.5	756.3	767.7	772.9
145°	587.3	618.6	646.2	672.0	695.0	710.7	719.9	724.5
147.5°	575.4	600.2	622.3	642.5	659.5	672.9	679.9	681.5
150°	568.0	589.1	607.5	624.1	638.8	650.8	656.3	657.3
152.5°	559.8	578.1	595.0	608.6	621.2	630.9	634.2	635.2
155°	547.7	562.4	576.2	587.3	596.5	603.9	606.7	606.7
157.5°	534.6	547.0	558.6	567.4	574.4	580.0	581.6	581.6
160°	526.6	536.6	546.8	554.1	559.7	565.2	566.1	566.1
162.5°	518.4	527.1	535.0	541.6	545.7	551.2	552.2	551.4
165°	507.2	512.7	519.2	523.8	527.4	531.2	530.2	529.3
167.5°	496.4	500.6	505.7	508.5	510.3	512.7	512.5	511.8
170°	489.7	492.5	496.1	498.9	500.7	501.7	500.7	500.7
172.5°	483.8	485.8	488.1	490.0	491.2	492.1	491.2	489.7
175°	475.9	476.8	478.6	478.6	478.6	480.5	478.6	476.8
177.5°	470.7	471.5	471.5	472.2	471.5	472.2	470.7	469.3
180°	468.6	468.6	468.6	468.6	468.6	468.6	468.6	468.6

(END OF REPORT)