

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: P334799

Luminaire Tested: **S124IP-S1205U835-4F0-1E-UDD-4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P334799  
TEST 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: S124IP-S1205U835-4F0-1E-UDD-4  
Description: DEFINE 4 INDIRECT LED LUMINAIRE, BATWING OPTIC  
PENDANT MOUNT, 1205 LUMENS PER FOOT  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4310.1 lumens  
Efficiency: N/A  
Efficacy: 102.9 lumens/watt  
Spacing Criteria (0/90/45): - / - / -  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Indirect

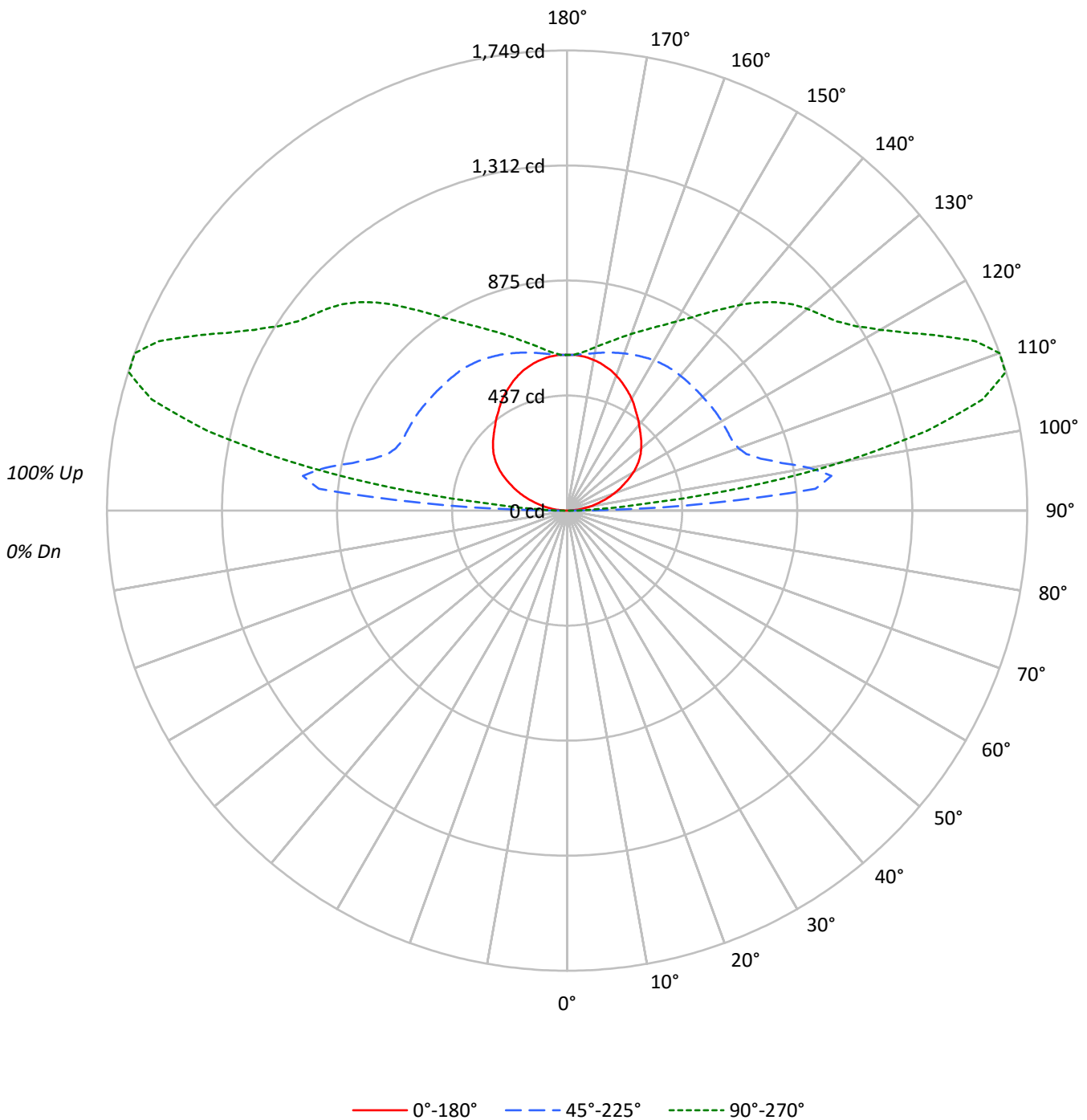
Input Watts (W): 41.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	95	95	95	95	81	81	81	81	56	56	56	32	32	32	10	10	10	0
1	87	83	79	76	74	71	68	65	48	47	45	28	27	26	9	9	8	0
2	79	72	66	62	67	62	57	53	42	40	37	24	23	22	8	7	7	0
3	72	63	56	51	61	54	49	44	37	34	31	21	20	18	7	6	6	0
4	65	56	48	43	56	48	42	37	33	29	26	19	17	16	6	6	5	0
5	60	49	42	36	51	42	36	32	29	25	22	17	15	13	5	5	4	0
6	55	44	36	31	47	38	32	27	26	22	19	15	13	11	5	4	4	0
7	50	39	32	27	43	34	28	23	23	19	17	14	11	10	4	4	3	0
8	47	35	28	23	40	30	24	20	21	17	14	12	10	9	4	3	3	0
9	43	32	25	20	37	27	22	18	19	15	13	11	9	8	4	3	3	0
10	40	29	22	18	34	25	19	16	17	14	11	10	8	7	3	3	2	0

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

	0°	45°	90°
0°	0	0	0
5°	0	0	0
10°	0	0	0
15°	0	0	0
20°	0	0	0
25°	0	0	0
30°	0	0	0
35°	0	0	0
40°	0	0	0
45°	0	0	0
50°	0	0	0
55°	0	0	0
60°	0	0	0
65°	0	0	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	0.0	0.0
10°-20°	0.0	0.0
20°-30°	0.0	0.0
30°-40°	0.0	0.0
40°-50°	0.0	0.0
50°-60°	0.0	0.0
60°-70°	0.0	0.0
70°-80°	0.0	0.0
80°-90°	2.3	0.1
90°-100°	428.7	9.9
100°-110°	894.9	20.8
110°-120°	795.5	18.5
120°-130°	669.7	15.5
130°-140°	558.7	13.0
140°-150°	426.6	9.9
150°-160°	299.9	7.0
160°-170°	176.4	4.1
170°-180°	57.4	1.3
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	2.3	0.1
90°-120°	2119.1	49.2
90°-150°	3774.1	87.6
90°-180°	4308.0	100.0
0°-180°	4310.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	0	0	0	0	0	
5°	0	0	0	0	0	0
15°	0	0	0	0	0	0
25°	0	0	0	0	0	0
35°	0	0	0	0	0	0
45°	0	0	0	0	0	0
55°	0	0	0	0	0	0
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	1	9	21	23	24	3
95°	38	121	947	469	284	42
105°	136	197	762	1641	1635	145
115°	239	300	680	1306	1570	237
125°	334	396	676	1111	1253	297
135°	396	472	670	987	1120	306
145°	457	523	667	832	914	287
155°	519	561	648	734	766	240
165°	566	583	622	658	668	160
175°	590	592	596	604	602	56
180°	592	592	592	592	592	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	1.2	3.5	7.0	8.1	9.3	9.3	16.3	16.3	18.6	20.9	19.8
92.5°	16.3	23.2	36.0	53.5	74.4	104.6	176.6	289.3	398.6	455.5	378.8
95°	38.3	41.8	53.5	68.6	96.4	145.3	246.3	436.9	714.6	947.0	973.8
97.5°	63.9	63.9	74.4	88.3	112.7	154.5	234.7	398.6	684.4	1013.3	1221.3
100°	88.3	88.3	96.4	110.4	132.5	169.7	238.2	369.5	606.6	934.2	1231.7
102.5°	111.6	113.9	120.8	133.6	154.5	189.4	249.8	361.4	554.3	835.5	1144.6
105°	136.0	139.4	145.3	159.2	180.1	213.8	269.6	366.0	528.7	762.3	1035.3
107.5°	162.7	165.0	170.8	185.9	205.7	239.4	290.5	380.0	521.7	714.6	945.9
110°	189.4	191.7	197.5	211.5	232.4	263.8	314.9	396.2	524.1	692.6	882.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	215.0	217.3	224.3	237.0	258.0	289.3	338.1	413.7	531.0	682.1	845.9
115°	239.4	242.9	251.0	262.6	284.7	316.1	362.5	432.3	540.3	679.8	826.2
117.5°	264.9	268.4	275.4	288.2	309.1	341.6	385.8	450.9	549.6	678.6	815.7
120°	290.5	292.8	301.0	313.7	333.5	366.0	410.2	470.6	560.1	678.6	807.6
122.5°	313.7	316.1	324.2	335.8	357.9	389.3	433.4	489.2	570.5	677.4	798.3
125°	333.5	338.1	345.1	357.9	380.0	412.5	454.3	507.8	581.0	676.3	787.8
127.5°	352.1	355.6	363.7	377.7	400.9	433.4	474.1	524.1	589.1	674.0	773.9
130°	367.2	371.8	381.1	398.6	420.6	454.3	493.9	539.2	598.4	672.8	761.1
132.5°	382.3	385.8	398.6	414.8	439.2	470.6	510.1	554.3	606.6	671.6	749.5
135°	396.2	400.9	412.5	432.3	456.7	486.9	525.2	567.1	614.7	670.5	737.9
137.5°	410.2	414.8	427.6	446.2	471.8	500.8	536.8	576.4	619.3	670.5	727.4
140°	425.3	428.8	441.6	461.3	485.7	513.6	548.5	585.6	625.2	669.3	719.3
142.5°	441.6	445.0	456.7	475.3	498.5	525.2	558.9	592.6	629.8	669.3	712.3
145°	456.7	460.2	471.8	488.0	510.1	535.7	565.9	597.3	631.0	667.0	704.2
147.5°	474.1	475.3	485.7	503.1	521.7	545.0	574.0	601.9	632.1	663.5	697.2
150°	490.4	491.5	500.8	514.8	532.2	554.3	579.8	605.4	632.1	660.0	689.1
152.5°	505.5	505.5	514.8	527.5	542.7	562.4	584.5	607.7	629.8	654.2	679.8
155°	519.4	520.6	527.5	539.2	552.0	569.4	589.1	608.9	627.5	648.4	670.5
157.5°	533.4	533.4	540.3	549.6	561.2	575.2	592.6	608.9	625.2	642.6	661.2
160°	546.1	546.1	550.8	558.9	568.2	581.0	594.9	608.9	621.7	635.6	650.7
162.5°	557.8	556.6	560.1	567.1	575.2	584.5	597.3	608.9	618.2	628.6	641.4
165°	565.9	565.9	568.2	574.0	579.8	586.8	597.3	606.6	613.5	621.7	631.0
167.5°	575.2	574.0	575.2	579.8	583.3	589.1	597.3	604.2	608.9	614.7	621.7
170°	581.0	579.8	581.0	584.5	586.8	590.3	596.1	601.9	604.2	607.7	612.4
172.5°	586.8	585.6	585.6	588.0	589.1	591.5	594.9	599.6	599.6	600.8	604.2
175°	590.3	589.1	589.1	590.3	591.5	591.5	593.8	597.3	596.1	596.1	598.4
177.5°	592.6	591.5	590.3	591.5	591.5	591.5	592.6	594.9	592.6	592.6	593.8
180°	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	20.9	22.1	23.2	23.2	24.4	25.6	24.4	24.4
92.5°	280.0	209.2	165.0	136.0	118.5	110.4	105.7	105.7
95°	861.0	680.9	525.2	412.5	355.6	319.6	298.6	283.5
97.5°	1239.9	1150.4	1022.6	892.4	813.4	743.7	708.8	680.9
100°	1401.4	1424.6	1367.7	1281.7	1180.6	1109.7	1074.9	1065.6
102.5°	1393.2	1531.5	1566.4	1543.1	1490.8	1444.4	1407.2	1400.2
105°	1301.4	1502.5	1617.5	1665.1	1667.5	1658.2	1641.9	1634.9
107.5°	1188.7	1406.0	1566.4	1664.0	1715.1	1736.0	1745.3	1746.5
110°	1088.8	1289.8	1458.3	1586.1	1668.6	1717.4	1738.4	1748.8





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1015.6	1187.6	1344.4	1472.3	1568.7	1630.3	1661.7	1680.3
115°	971.4	1114.4	1250.3	1361.9	1453.7	1523.4	1560.6	1569.9
117.5°	945.9	1066.7	1177.1	1274.7	1356.1	1416.5	1456.0	1461.8
120°	929.6	1037.7	1130.6	1213.1	1279.4	1330.5	1360.7	1373.5
122.5°	915.7	1019.1	1101.6	1171.3	1224.7	1266.6	1291.0	1303.8
125°	899.4	999.3	1079.5	1143.4	1189.9	1223.6	1245.7	1252.6
127.5°	880.8	977.2	1057.4	1117.8	1164.3	1194.5	1213.1	1220.1
130°	857.6	949.4	1028.4	1090.0	1137.6	1166.6	1185.2	1192.2
132.5°	833.2	918.0	994.7	1056.3	1102.7	1136.4	1153.9	1160.8
135°	811.1	886.6	957.5	1015.6	1062.1	1094.6	1113.2	1120.2
137.5°	790.2	856.4	918.0	971.4	1015.6	1049.3	1064.4	1072.5
140°	772.7	827.3	879.6	928.4	969.1	994.7	1010.9	1020.2
142.5°	756.5	802.9	845.9	886.6	921.5	944.7	958.7	964.5
145°	741.4	780.9	815.7	848.3	877.3	897.1	908.7	914.5
147.5°	728.6	761.1	790.2	816.9	839.0	856.4	865.7	868.0
150°	717.0	743.7	766.9	787.8	806.4	821.5	828.5	829.7
152.5°	704.2	726.3	747.2	763.4	778.5	790.2	793.6	794.8
155°	691.4	710.0	727.4	741.4	753.0	762.3	765.8	765.8
157.5°	677.4	693.7	708.8	720.4	729.7	736.7	739.0	739.0
160°	664.7	677.4	690.2	699.5	706.5	713.5	714.6	714.6
162.5°	651.9	662.3	671.6	679.8	684.4	691.4	692.6	691.4
165°	640.3	647.2	655.4	661.2	665.8	670.5	669.3	668.2
167.5°	628.6	634.5	641.4	644.9	647.2	650.7	650.7	649.6
170°	618.2	621.7	626.3	629.8	632.1	633.3	632.1	632.1
172.5°	608.9	611.2	613.5	615.9	617.0	618.2	617.0	614.7
175°	600.8	601.9	604.2	604.2	604.2	606.6	604.2	601.9
177.5°	594.9	596.1	596.1	597.3	596.1	597.3	594.9	592.6
180°	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5

(END OF REPORT)