

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: P334629

Luminaire Tested: **S123IP-S1195U840-4F0-1E-UDD-4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334629
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123IP-S1195U840-4F0-1E-UDD-4
Description: DEFINE 3 INDIRECT LED LUMINAIRE, BATWING OPTIC
PENDANT MOUNT, 1195 LUMENS PER FOOT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

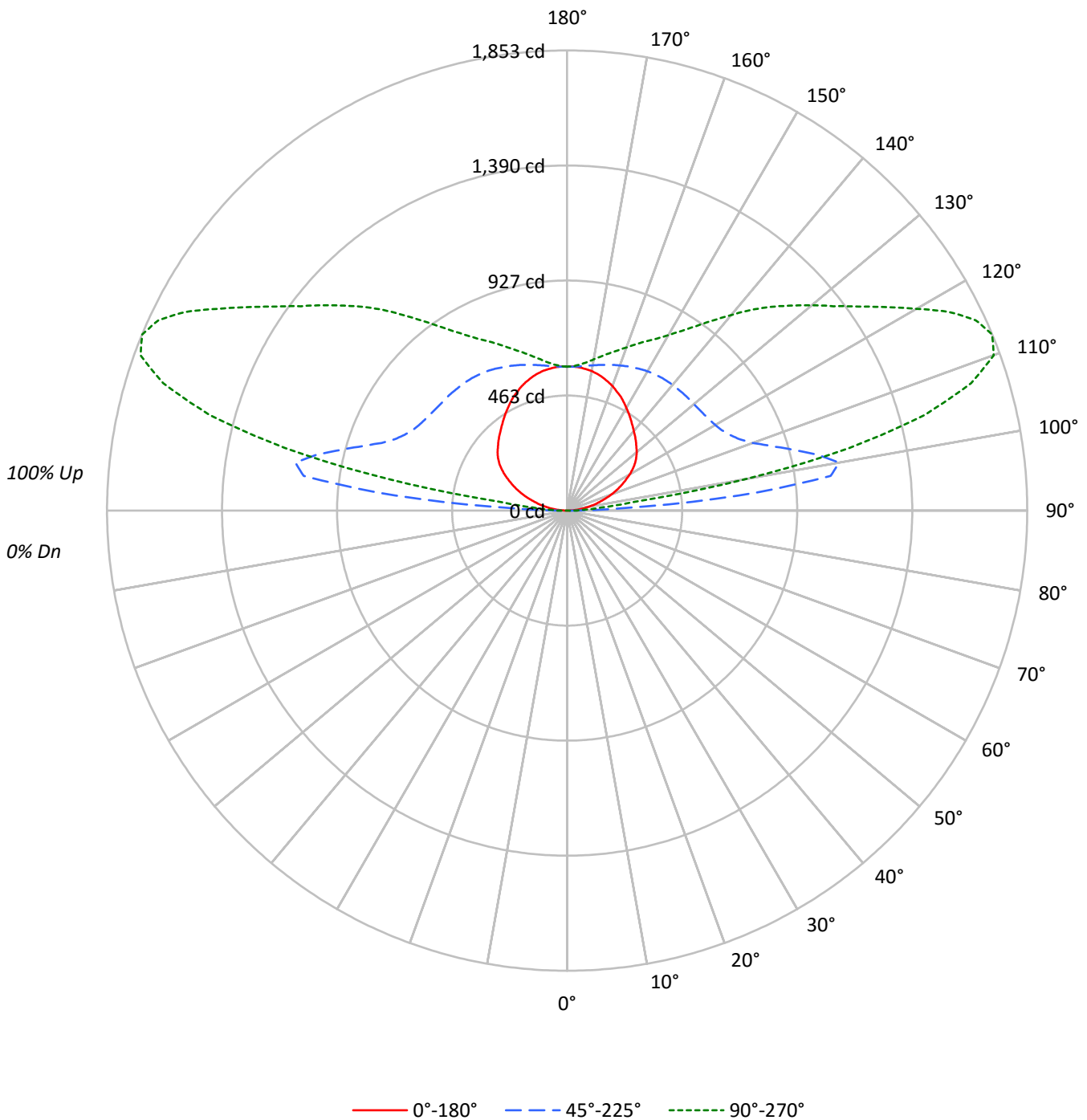
Lumens per Lamp: N/A
Luminaire Lumens: 4363.1 lumens
Efficiency: N/A
Efficacy: 104.1 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Indirect

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°	3.2	0.1
90°-100°	314.5	7.2
100°-110°	920.8	21.1
110°-120°	899.2	20.6
120°-130°	716.1	16.4
130°-140°	565.0	12.9
140°-150°	421.5	9.7
150°-160°	293.9	6.7
160°-170°	172.6	4.0
170°-180°	56.2	1.3
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	3.2	0.1
90°-120°	2134.6	48.9
90°-150°	3837.3	87.9
90°-180°	4360.0	99.9
0°-180°	4363.1	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°	2	14	29	33	34	3
95°	40	130	696	203	136	42
105°	136	201	943	1650	1492	145
115°	240	300	722	1582	1815	238
125°	334	395	674	1220	1431	297
135°	392	468	664	1005	1160	303
145°	447	512	656	824	907	280
155°	508	548	635	722	752	234
165°	555	571	608	645	656	156
175°	578	579	583	591	590	55
180°	580	580	580	580	580	



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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°	2.3	4.7	7.0	10.6	12.9	15.3	18.8	22.3	25.8	29.3	28.2
92.5°	17.6	25.8	37.5	48.1	59.8	81.0	118.5	180.7	241.7	218.2	163.1
95°	39.9	43.4	56.3	76.3	106.8	152.5	252.3	427.1	619.5	695.8	564.4
97.5°	63.4	64.5	75.1	92.7	123.2	173.6	272.2	475.2	799.0	1070.1	1106.4
100°	86.8	88.0	96.2	112.6	140.8	186.6	268.7	442.3	750.9	1111.1	1342.3
102.5°	111.5	113.8	120.9	136.1	160.7	201.8	273.4	414.2	680.5	1034.9	1354.0
105°	136.1	139.6	146.7	160.7	183.0	219.4	282.8	403.6	625.4	943.3	1280.1
107.5°	161.9	165.4	172.5	186.6	207.7	241.7	298.0	401.3	585.5	862.4	1174.5
110°	190.1	193.6	199.5	212.4	232.3	265.2	318.0	407.1	564.4	795.5	1075.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	215.9	219.4	225.3	238.2	258.1	289.8	337.9	418.9	552.6	750.9	990.3
115°	240.5	245.2	252.3	264.0	283.9	315.6	360.2	431.8	551.5	721.6	924.6
117.5°	265.2	271.0	276.9	287.5	309.8	339.1	383.7	448.2	552.6	701.6	881.2
120°	291.0	294.5	300.4	312.1	334.4	363.7	406.0	467.0	557.3	688.7	848.3
122.5°	313.3	316.8	322.7	335.6	356.7	388.4	429.4	484.6	565.5	680.5	821.3
125°	334.4	336.7	343.8	356.7	379.0	410.7	451.7	503.3	573.7	673.5	799.0
127.5°	350.8	354.3	362.6	375.5	400.1	431.8	471.7	518.6	583.1	670.0	777.9
130°	366.1	369.6	380.2	394.2	418.9	450.6	489.3	533.9	592.5	666.4	761.5
132.5°	377.8	382.5	394.2	411.8	436.5	467.0	504.5	547.9	599.6	665.3	746.2
135°	391.9	396.6	409.5	427.1	451.7	483.4	519.8	559.7	606.6	664.1	733.3
137.5°	404.8	409.5	422.4	441.2	465.8	495.1	530.3	569.1	611.3	661.7	721.6
140°	417.7	423.6	435.3	454.1	477.5	506.9	540.9	576.1	616.0	660.6	711.0
142.5°	431.8	436.5	449.4	465.8	489.3	516.3	549.1	583.1	619.5	658.2	701.6
145°	447.0	450.6	461.1	478.7	498.7	525.6	556.1	587.8	620.7	655.9	693.4
147.5°	462.3	464.6	475.2	490.4	510.4	533.9	562.0	591.3	620.7	652.4	685.2
150°	477.5	478.7	488.1	503.3	519.8	540.9	567.9	592.5	620.7	647.7	677.0
152.5°	492.8	492.8	502.2	515.1	529.2	549.1	571.4	594.9	617.2	641.8	667.6
155°	508.0	508.0	515.1	526.8	539.7	556.1	576.1	594.9	614.8	634.8	658.2
157.5°	519.8	520.9	526.8	537.4	549.1	562.0	578.4	596.0	611.3	628.9	647.7
160°	533.9	533.9	538.5	547.9	556.1	567.9	582.0	596.0	608.9	621.9	637.1
162.5°	544.4	544.4	547.9	555.0	562.0	571.4	583.1	594.9	604.3	614.8	626.5
165°	555.0	553.8	556.1	562.0	566.7	574.9	584.3	592.5	599.6	607.8	617.2
167.5°	563.2	562.0	563.2	567.9	571.4	577.3	584.3	591.3	594.9	600.7	607.8
170°	570.2	567.9	569.1	572.6	574.9	577.3	583.1	587.8	590.2	593.7	599.6
172.5°	574.9	573.7	573.7	576.1	577.3	578.4	583.1	586.7	586.7	587.8	591.3
175°	578.4	577.3	576.1	578.4	578.4	579.6	582.0	584.3	583.1	583.1	585.5
177.5°	580.8	579.6	578.4	579.6	579.6	579.6	580.8	583.1	580.8	579.6	580.8
180°	579.6	579.6	579.6	579.6	579.6	579.6	579.6	579.6	579.6	579.6	579.6



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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°	29.3	30.5	31.7	34.0	32.9	34.0	35.2	34.0
92.5°	116.2	90.3	78.6	70.4	68.1	63.4	64.5	62.2
95°	422.4	286.3	224.1	181.9	159.6	149.0	140.8	136.1
97.5°	970.3	732.1	577.3	443.5	364.9	320.3	292.2	279.2
100°	1383.3	1288.3	1151.0	984.4	865.9	780.3	734.5	735.7
102.5°	1520.6	1540.6	1474.8	1384.5	1298.9	1235.5	1199.1	1165.1
105°	1525.3	1642.6	1664.9	1634.4	1580.4	1535.9	1498.3	1492.4
107.5°	1454.9	1639.1	1730.6	1762.3	1755.3	1734.2	1718.9	1706.0
110°	1344.6	1560.5	1708.3	1790.5	1823.3	1832.7	1830.4	1828.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1235.5	1457.3	1627.4	1738.8	1805.7	1839.7	1851.5	1852.7
115°	1141.6	1345.8	1518.3	1646.2	1734.2	1785.8	1809.2	1815.1
117.5°	1068.9	1249.6	1408.0	1540.6	1632.1	1689.6	1724.8	1733.0
120°	1013.7	1172.1	1312.9	1431.4	1524.1	1589.8	1618.0	1625.0
122.5°	970.3	1110.0	1237.8	1345.8	1425.6	1483.1	1514.7	1524.1
125°	932.8	1060.7	1173.3	1267.2	1342.3	1393.9	1423.2	1431.4
127.5°	898.8	1014.9	1118.2	1205.0	1273.0	1317.6	1344.6	1351.7
130°	867.1	972.7	1067.7	1147.5	1209.7	1251.9	1276.6	1285.9
132.5°	837.7	932.8	1019.6	1094.7	1152.2	1194.4	1215.5	1221.4
135°	811.9	895.2	971.5	1038.4	1095.9	1131.1	1152.2	1160.4
137.5°	787.3	857.7	925.7	985.6	1034.9	1071.2	1088.8	1095.9
140°	766.2	826.0	882.3	932.8	977.4	1010.2	1029.0	1027.8
142.5°	746.2	795.5	842.4	884.7	921.0	949.2	965.6	964.5
145°	731.0	769.7	807.2	841.3	870.6	895.2	904.6	907.0
147.5°	718.1	749.7	781.4	806.1	829.5	847.1	856.5	857.7
150°	704.0	731.0	755.6	777.9	795.5	808.4	815.4	815.4
152.5°	691.1	713.4	734.5	752.1	765.0	776.7	780.3	780.3
155°	678.2	696.9	714.5	728.6	739.2	748.6	750.9	752.1
157.5°	664.1	680.5	694.6	706.3	715.7	722.8	725.1	725.1
160°	652.4	665.3	677.0	685.2	693.4	700.5	700.5	699.3
162.5°	638.3	648.8	659.4	666.4	671.1	677.0	677.0	675.8
165°	626.5	633.6	641.8	647.7	652.4	657.1	655.9	655.9
167.5°	616.0	621.9	626.5	631.2	633.6	637.1	635.9	635.9
170°	605.4	608.9	613.6	616.0	617.2	619.5	618.3	618.3
172.5°	596.0	598.4	601.9	603.1	603.1	605.4	603.1	601.9
175°	587.8	589.0	591.3	591.3	591.3	592.5	591.3	590.2
177.5°	582.0	583.1	584.3	584.3	583.1	584.3	582.0	582.0
180°	579.6	579.6	579.6	579.6	579.6	579.6	579.6	579.6

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