

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: P334797

Luminaire Tested: **S124IP-S810U835-4F0-1E-UDD-4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334797
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-S810U835-4F0-1E-UDD-4
Description: DEFINE 4 INDIRECT LED LUMINAIRE, BATWING OPTIC
PENDANT MOUNT, 810 LUMENS PER FOOT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2900.3 lumens
Efficiency: N/A
Efficacy: 109.9 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Indirect

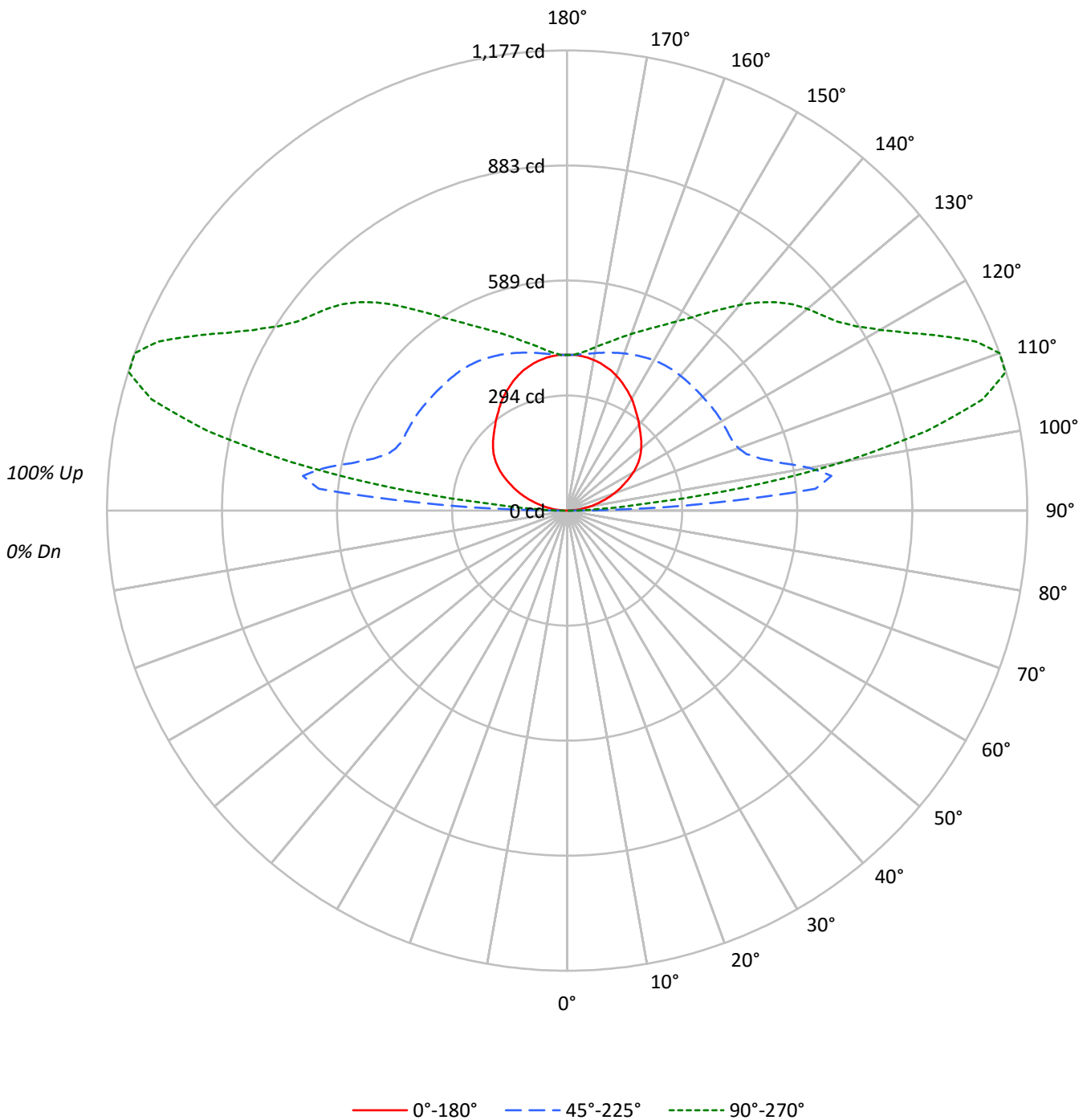
Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1.6	0.1
90°-100°	288.5	9.9
100°-110°	602.2	20.8
110°-120°	535.3	18.5
120°-130°	450.6	15.5
130°-140°	376.0	13.0
140°-150°	287.0	9.9
150°-160°	201.8	7.0
160°-170°	118.7	4.1
170°-180°	38.6	1.3
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	1.6	0.1
90°-120°	1426.0	49.2
90°-150°	2539.6	87.6
90°-180°	2899.0	100.0
0°-180°	2900.3	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	6	14	16	16	2
95°	26	81	637	316	191	28
105°	92	133	513	1104	1100	97
115°	161	202	457	879	1056	160
125°	224	267	455	748	843	200
135°	267	317	451	664	754	206
145°	307	352	449	560	615	193
155°	350	377	436	494	515	161
165°	381	393	418	443	450	108
175°	397	398	401	407	405	38
180°	398	398	398	398	398	



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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°	0.8	2.3	4.7	5.5	6.3	6.3	10.9	10.9	12.5	14.1	13.3
92.5°	10.9	15.6	24.2	36.0	50.0	70.4	118.9	194.7	268.2	306.5	254.9
95°	25.8	28.1	36.0	46.1	64.9	97.7	165.8	294.0	480.9	637.3	655.3
97.5°	43.0	43.0	50.0	59.4	75.8	104.0	157.9	268.2	460.6	681.8	821.8
100°	59.4	59.4	64.9	74.3	89.1	114.2	160.3	248.7	408.2	628.7	828.8
102.5°	75.1	76.6	81.3	89.9	104.0	127.5	168.1	243.2	373.0	562.2	770.2
105°	91.5	93.8	97.7	107.1	121.2	143.9	181.4	246.3	355.8	512.9	696.7
107.5°	109.5	111.0	114.9	125.1	138.4	161.1	195.5	255.7	351.1	480.9	636.5
110°	127.5	129.0	132.9	142.3	156.4	177.5	211.9	266.6	352.6	466.0	593.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	144.7	146.2	150.9	159.5	173.6	194.7	227.5	278.4	357.3	459.0	569.2
115°	161.1	163.4	168.9	176.7	191.6	212.7	244.0	290.9	363.6	457.4	555.9
117.5°	178.3	180.6	185.3	193.9	208.0	229.9	259.6	303.4	369.8	456.6	548.9
120°	195.5	197.0	202.5	211.1	224.4	246.3	276.0	316.7	376.9	456.6	543.4
122.5°	211.1	212.7	218.2	226.0	240.8	261.9	291.7	329.2	383.9	455.9	537.2
125°	224.4	227.5	232.2	240.8	255.7	277.6	305.7	341.7	391.0	455.1	530.1
127.5°	236.9	239.3	244.7	254.1	269.8	291.7	319.0	352.6	396.4	453.5	520.8
130°	247.1	250.2	256.5	268.2	283.1	305.7	332.3	362.8	402.7	452.7	512.2
132.5°	257.3	259.6	268.2	279.1	295.6	316.7	343.3	373.0	408.2	452.0	504.3
135°	266.6	269.8	277.6	290.9	307.3	327.6	353.4	381.6	413.6	451.2	496.5
137.5°	276.0	279.1	287.7	300.3	317.5	337.0	361.2	387.8	416.8	451.2	489.5
140°	286.2	288.5	297.1	310.4	326.8	345.6	369.1	394.1	420.7	450.4	484.0
142.5°	297.1	299.5	307.3	319.8	335.4	353.4	376.1	398.8	423.8	450.4	479.3
145°	307.3	309.6	317.5	328.4	343.3	360.5	380.8	401.9	424.6	448.8	473.8
147.5°	319.0	319.8	326.8	338.6	351.1	366.7	386.3	405.0	425.4	446.5	469.2
150°	330.0	330.8	337.0	346.4	358.1	373.0	390.2	407.4	425.4	444.1	463.7
152.5°	340.1	340.1	346.4	355.0	365.2	378.5	393.3	408.9	423.8	440.2	457.4
155°	349.5	350.3	355.0	362.8	371.4	383.1	396.4	409.7	422.2	436.3	451.2
157.5°	358.9	358.9	363.6	369.8	377.7	387.1	398.8	409.7	420.7	432.4	444.9
160°	367.5	367.5	370.6	376.1	382.4	391.0	400.3	409.7	418.3	427.7	437.9
162.5°	375.3	374.5	376.9	381.6	387.1	393.3	401.9	409.7	416.0	423.0	431.6
165°	380.8	380.8	382.4	386.3	390.2	394.9	401.9	408.2	412.9	418.3	424.6
167.5°	387.1	386.3	387.1	390.2	392.5	396.4	401.9	406.6	409.7	413.6	418.3
170°	391.0	390.2	391.0	393.3	394.9	397.2	401.1	405.0	406.6	408.9	412.1
172.5°	394.9	394.1	394.1	395.7	396.4	398.0	400.3	403.5	403.5	404.3	406.6
175°	397.2	396.4	396.4	397.2	398.0	398.0	399.6	401.9	401.1	401.1	402.7
177.5°	398.8	398.0	397.2	398.0	398.0	398.0	398.8	400.3	398.8	398.8	399.6
180°	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0



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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°	14.1	14.9	15.6	15.6	16.4	17.2	16.4	16.4
92.5°	188.4	140.7	111.0	91.5	79.8	74.3	71.2	71.2
95°	579.4	458.2	353.4	277.6	239.3	215.0	201.0	190.8
97.5°	834.3	774.1	688.1	600.5	547.3	500.4	477.0	458.2
100°	943.0	958.6	920.3	862.5	794.4	746.7	723.3	717.0
102.5°	937.5	1030.6	1054.0	1038.4	1003.2	971.9	946.9	942.2
105°	875.8	1011.0	1088.4	1120.5	1122.1	1115.8	1104.9	1100.2
107.5°	799.9	946.1	1054.0	1119.7	1154.1	1168.2	1174.4	1175.2
110°	732.7	867.9	981.3	1067.3	1122.8	1155.7	1169.8	1176.8



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CATALOG NUMBER: S124IP-S810U835-4F0-1E-UDD-4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	683.4	799.1	904.7	990.7	1055.6	1097.0	1118.1	1130.7
115°	653.7	749.9	841.3	916.4	978.2	1025.1	1050.1	1056.4
117.5°	636.5	717.8	792.1	857.8	912.5	953.2	979.7	983.7
120°	625.5	698.3	760.8	816.3	860.9	895.3	915.6	924.2
122.5°	616.2	685.7	741.3	788.2	824.1	852.3	868.7	877.3
125°	605.2	672.5	726.4	769.4	800.7	823.4	838.2	842.9
127.5°	592.7	657.6	711.5	752.2	783.5	803.8	816.3	821.0
130°	577.1	638.8	692.0	733.4	765.5	785.1	797.6	802.3
132.5°	560.6	617.7	669.3	710.8	742.0	764.7	776.4	781.1
135°	545.8	596.6	644.3	683.4	714.7	736.6	749.1	753.8
137.5°	531.7	576.3	617.7	653.7	683.4	706.1	716.2	721.7
140°	520.0	556.7	591.9	624.8	652.1	669.3	680.3	686.5
142.5°	509.0	540.3	569.2	596.6	620.1	635.7	645.1	649.0
145°	498.9	525.5	548.9	570.8	590.4	603.6	611.5	615.4
147.5°	490.3	512.2	531.7	549.7	564.5	576.3	582.5	584.1
150°	482.4	500.4	516.1	530.1	542.7	552.8	557.5	558.3
152.5°	473.8	488.7	502.8	513.7	523.9	531.7	534.1	534.8
155°	465.2	477.8	489.5	498.9	506.7	512.9	515.3	515.3
157.5°	455.9	466.8	477.0	484.8	491.0	495.7	497.3	497.3
160°	447.3	455.9	464.5	470.7	475.4	480.1	480.9	480.9
162.5°	438.7	445.7	452.0	457.4	460.6	465.2	466.0	465.2
165°	430.8	435.5	441.0	444.9	448.0	451.2	450.4	449.6
167.5°	423.0	426.9	431.6	434.0	435.5	437.9	437.9	437.1
170°	416.0	418.3	421.5	423.8	425.4	426.1	425.4	425.4
172.5°	409.7	411.3	412.9	414.4	415.2	416.0	415.2	413.6
175°	404.3	405.0	406.6	406.6	406.6	408.2	406.6	405.0
177.5°	400.3	401.1	401.1	401.9	401.1	401.9	400.3	398.8
180°	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0

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