

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: P332549-927

Luminaire Tested: **S124DIP-S575D590U927-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332549-927
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-S575D590U927-4F0-1E-UDD-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3550.7 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

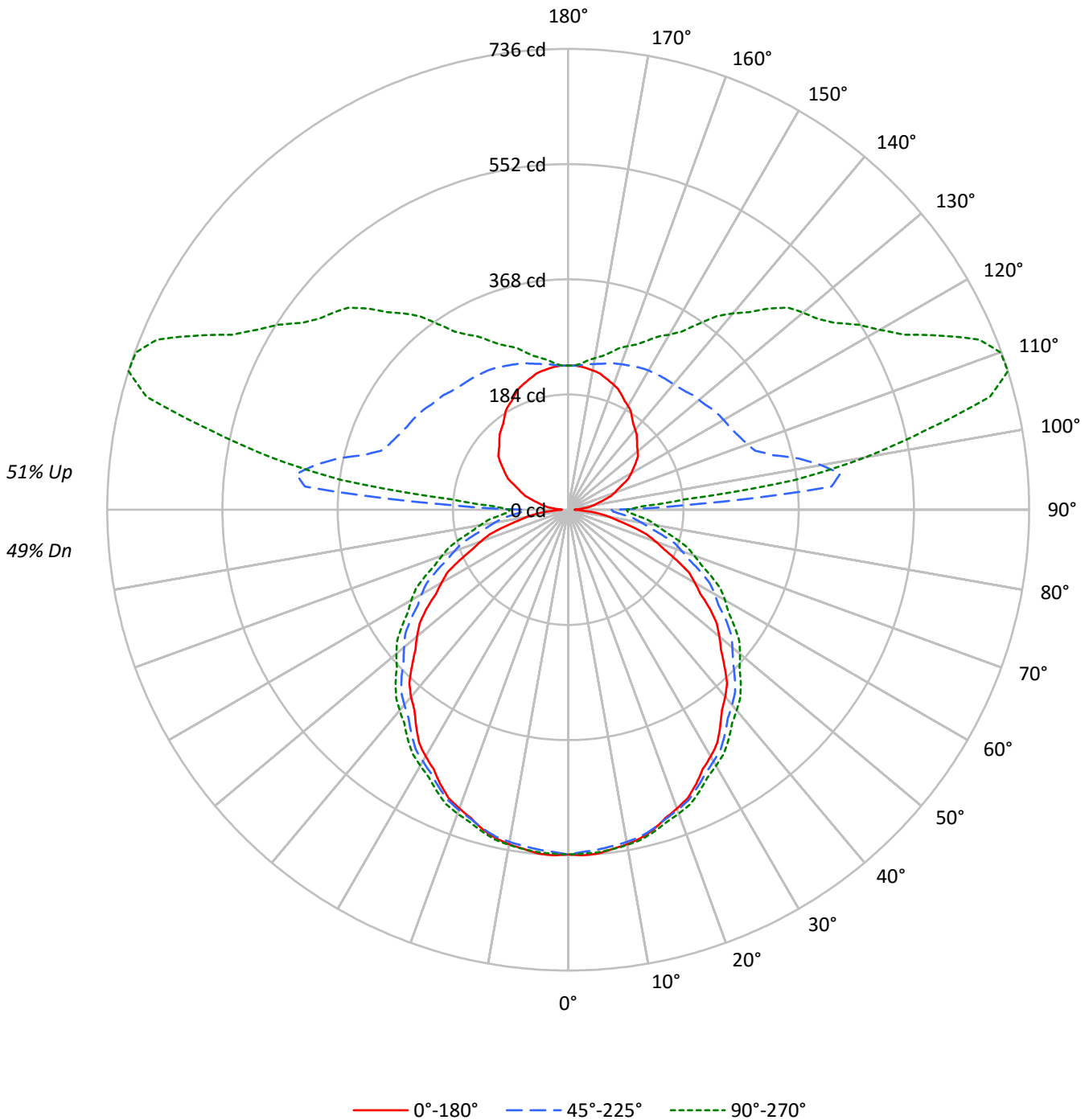
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49
1	97	92	88	84	89	85	81	78	71	68	66	59	57	55	47	46	45	39
2	87	80	73	68	80	73	68	63	62	57	54	51	48	45	41	39	37	32
3	80	70	62	56	73	64	57	52	54	49	45	45	41	38	36	33	31	27
4	73	61	53	47	66	57	49	44	48	42	38	40	35	32	32	29	26	22
5	67	54	46	40	61	50	43	37	43	37	32	35	31	27	29	25	23	19
6	61	49	40	34	56	45	38	32	38	32	28	32	27	24	26	22	20	17
7	56	44	36	30	52	41	33	28	35	29	25	29	24	21	24	20	17	15
8	52	40	32	26	48	37	30	25	31	26	22	26	22	19	22	18	16	13
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	16	14	12
10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4444	4444	4444
5°	4458	4343	4355
10°	4431	4273	4269
15°	4391	4190	4167
20°	4331	4099	4068
25°	4264	3998	3958
30°	4191	3896	3847
35°	4108	3792	3748
40°	4041	3694	3646
45°	3943	3603	3558
50°	3860	3498	3465
55°	3775	3400	3356
60°	3640	3274	3257
65°	3494	3139	3136
70°	3315	2985	2993
75°	3068	2814	2864
80°	2794	2652	2738
85°	2439	2507	2665



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.1	1.5
10°-20°	149.4	4.2
20°-30°	225.8	6.4
30°-40°	273.2	7.7
40°-50°	288.9	8.1
50°-60°	271.9	7.7
60°-70°	225.6	6.4
70°-80°	158.4	4.5
80°-90°	90.8	2.6
90°-100°	219.3	6.2
100°-110°	385.1	10.8
110°-120°	336.1	9.5
120°-130°	275.4	7.8
130°-140°	223.7	6.3
140°-150°	167.2	4.7
150°-160°	116.7	3.3
160°-170°	68.6	1.9
170°-180°	22.3	0.6
0°-30°	427.3	12.0
0°-40°	700.6	19.7
0°-60°	1261.3	35.5
0°-90°	1736.1	48.9
90°-120°	940.6	26.5
90°-150°	1606.9	45.3
90°-180°	1815.0	51.1
0°-180°	3550.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	550	550	550	550	550	
5°	551	549	545	550	549	52
15°	528	529	527	532	532	149
25°	483	487	489	495	496	223
35°	423	430	436	445	447	265
45°	353	364	376	386	390	272
55°	276	289	308	319	324	246
65°	191	211	232	247	252	189
75°	106	129	155	171	178	113
85°	33	59	86	104	111	35
90°	10	38	69	87	93	7
95°	23	76	422	252	186	23
105°	58	95	337	694	697	63
115°	97	127	293	550	657	96
125°	132	157	280	461	520	118
135°	155	185	266	399	455	120
145°	178	203	259	327	362	112
155°	202	218	252	286	298	93
165°	220	227	242	256	260	62
175°	230	230	232	235	234	22
180°	230	230	230	230	230	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5
2.5°	552.5	552.2	551.8	551.4	551.1	550.6	549.7	548.8	547.9	547.0	547.8
5°	551.1	550.7	550.2	549.9	549.5	548.7	547.8	546.8	545.9	544.9	546.1
7.5°	546.4	546.1	545.9	545.7	545.4	544.9	544.2	543.4	542.5	541.7	543.0
10°	542.5	542.3	542.2	542.1	541.9	541.5	540.8	540.1	539.5	538.8	540.0
12.5°	537.0	537.0	537.0	536.9	536.9	536.7	536.2	535.8	535.3	534.8	535.9
15°	528.3	528.5	528.5	528.7	528.9	528.7	528.3	527.9	527.4	527.0	528.3
17.5°	516.3	516.7	517.1	517.5	518.0	518.2	518.1	518.0	517.9	517.8	519.0
20°	507.9	508.3	508.7	509.2	509.6	509.8	510.0	510.2	510.2	510.4	511.7
22.5°	498.6	499.1	499.6	500.1	500.7	501.1	501.3	501.5	501.8	502.0	503.4
25°	483.3	484.1	485.0	485.8	486.6	487.2	487.6	488.0	488.5	488.9	490.4
27.5°	466.3	467.5	468.7	469.9	471.1	472.0	472.6	473.2	473.9	474.5	475.9
30°	455.0	456.1	457.1	458.2	459.3	460.3	461.3	462.2	463.2	464.2	465.7
32.5°	442.6	443.9	445.2	446.6	447.9	449.1	450.1	451.2	452.3	453.4	455.0
35°	422.9	424.5	426.2	427.8	429.4	430.9	432.3	433.7	435.1	436.4	438.4
37.5°	403.1	404.9	406.8	408.7	410.6	412.4	414.1	415.8	417.5	419.1	421.1
40°	390.2	392.0	393.8	395.5	397.4	399.2	401.1	403.0	405.0	406.9	408.9
42.5°	375.4	377.4	379.4	381.4	383.4	385.6	387.8	390.0	392.3	394.5	396.8
45°	352.6	355.2	357.8	360.4	363.0	365.6	368.2	370.8	373.4	376.0	378.3
47.5°	330.8	333.4	336.1	338.8	341.5	344.4	347.4	350.4	353.4	356.4	358.9
50°	315.0	318.0	321.0	324.1	327.1	330.1	333.1	336.1	339.1	342.1	344.8
52.5°	299.2	302.2	305.2	308.2	311.2	314.5	318.0	321.4	324.9	328.3	331.1
55°	276.2	279.0	281.9	284.8	287.6	291.1	295.2	299.4	303.5	307.6	310.4
57.5°	250.4	254.0	257.5	261.1	264.7	268.5	272.5	276.6	280.7	284.8	288.0
60°	233.6	237.2	240.7	244.3	247.9	251.9	256.4	260.9	265.5	270.0	273.1
62.5°	217.4	221.3	225.1	229.0	232.9	237.1	241.6	246.1	250.7	255.2	258.3
65°	191.1	195.5	199.9	204.2	208.7	213.2	217.8	222.4	227.1	231.8	235.2
67.5°	165.8	170.5	175.2	179.8	184.4	189.3	194.2	199.2	204.2	209.2	212.7
70°	148.5	153.2	157.9	162.6	167.2	172.1	177.3	182.5	187.7	193.0	196.6
72.5°	131.8	136.6	141.3	146.1	150.8	156.0	161.5	167.1	172.6	178.2	181.7
75°	106.0	111.1	116.1	121.2	126.3	131.7	137.4	143.2	149.0	154.7	158.6
77.5°	82.0	87.4	92.8	98.1	103.5	109.2	115.2	121.2	127.2	133.2	137.1
80°	67.2	72.6	78.2	83.7	89.1	94.8	100.9	106.9	113.0	119.0	123.1
82.5°	52.4	58.1	63.8	69.5	75.2	81.0	87.1	93.1	99.1	105.2	109.4
85°	32.6	38.4	44.2	49.9	55.7	61.6	67.8	74.0	80.2	86.3	90.4
87.5°	18.3	24.1	29.9	35.6	41.4	47.1	53.6	59.7	65.8	72.0	75.9
90°	10.3	16.7	23.5	29.5	35.4	41.1	49.7	55.6	62.3	69.2	72.7
92.5°	14.5	21.8	31.0	41.4	52.9	67.7	96.6	137.6	177.6	201.4	181.3
95°	22.9	28.8	37.9	48.2	63.6	87.6	132.6	212.3	325.9	421.9	436.0
97.5°	34.1	37.9	45.7	55.0	68.2	88.8	124.7	191.4	304.4	437.7	529.2
100°	41.1	44.7	51.4	60.4	72.6	91.4	123.4	179.9	277.4	410.2	529.6
102.5°	48.3	52.2	58.1	66.3	77.6	95.5	124.9	175.1	258.8	377.0	499.9
105°	58.4	62.5	67.5	75.7	86.6	103.5	130.3	172.9	241.2	337.2	446.8
107.5°	70.7	73.9	78.4	86.4	96.5	112.9	137.6	176.6	235.4	313.3	403.4
110°	78.6	81.4	85.6	92.9	103.0	118.5	143.2	179.7	234.2	304.4	381.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	86.0	88.6	93.0	99.7	109.6	124.9	148.6	183.1	234.1	298.7	367.5
115°	96.8	99.3	103.8	109.6	119.4	134.4	156.9	188.3	234.7	293.3	353.3
117.5°	108.6	110.6	114.2	119.9	128.7	143.7	164.9	194.0	235.8	289.1	344.8
120°	116.1	117.4	121.0	126.4	134.4	149.2	170.4	197.9	236.6	286.7	339.6
122.5°	123.3	124.3	127.5	132.2	140.7	154.9	175.9	201.6	237.7	283.9	334.2
125°	132.1	133.8	136.4	141.2	149.7	164.0	183.7	207.9	239.8	280.3	326.2
127.5°	140.5	141.7	144.9	150.4	159.2	173.3	191.5	213.3	240.7	275.6	316.0
130°	144.7	146.3	149.8	156.5	164.9	179.0	196.5	216.4	241.6	272.7	309.6
132.5°	149.3	150.7	155.2	161.5	170.6	183.9	201.0	220.0	242.6	270.5	303.9
135°	155.3	157.2	161.7	169.4	178.8	191.1	206.9	224.2	243.7	266.3	294.7
137.5°	161.9	163.5	168.3	175.5	185.2	196.6	211.0	226.6	243.6	263.4	287.0
140°	166.6	167.9	172.7	180.2	189.6	200.4	214.1	228.7	244.2	261.5	282.7
142.5°	171.2	172.5	177.1	184.4	193.5	203.9	217.1	230.4	244.9	260.5	279.4
145°	178.2	179.4	183.8	190.0	198.4	208.3	220.1	232.3	245.4	259.4	274.6
147.5°	186.2	186.6	190.4	196.8	203.7	212.7	223.7	234.3	245.8	257.8	270.6
150°	191.3	191.6	195.1	200.4	207.1	215.6	225.5	235.4	245.8	256.7	268.0
152.5°	195.5	195.6	199.2	204.2	210.2	218.1	227.0	236.1	245.1	254.8	265.1
155°	202.0	202.5	205.2	209.7	214.7	221.4	229.1	236.8	244.0	252.2	260.7
157.5°	208.4	208.4	211.0	214.4	218.8	224.1	230.7	236.8	242.9	249.4	256.4
160°	212.4	212.4	214.2	217.4	220.9	225.9	231.4	236.8	241.8	247.2	253.1
162.5°	216.0	215.6	217.1	219.9	223.2	227.0	232.1	236.8	240.7	245.0	250.2
165°	220.1	220.1	220.9	223.2	225.5	228.2	232.3	235.9	238.6	241.8	245.4
167.5°	224.1	223.7	224.1	225.9	227.1	229.2	232.2	234.8	236.5	238.5	241.1
170°	225.9	225.5	225.9	227.3	228.2	229.6	231.8	234.1	235.0	236.3	238.1
172.5°	227.8	227.3	227.4	228.4	228.9	229.9	231.5	233.4	233.5	234.2	235.6
175°	229.6	229.1	229.1	229.6	230.0	230.0	230.9	232.3	231.8	231.8	232.7
177.5°	230.4	230.0	229.7	230.0	230.0	230.0	230.4	231.1	230.4	230.4	230.8
180°	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5
2.5°	548.6	549.3	550.1	550.4	550.3	550.2	550.1	550.0
5°	547.2	548.2	549.3	549.8	549.7	549.5	549.4	549.2
7.5°	544.2	545.4	546.7	547.2	547.1	546.9	546.8	546.7
10°	541.2	542.5	543.7	544.2	544.2	544.0	543.8	543.7
12.5°	537.1	538.2	539.3	539.9	539.9	539.8	539.8	539.8
15°	529.5	530.8	532.0	532.5	532.4	532.3	532.1	532.0
17.5°	520.3	521.6	522.8	523.4	523.3	523.2	523.1	523.0
20°	513.2	514.5	515.9	516.6	516.6	516.6	516.6	516.6
22.5°	504.8	506.1	507.5	508.3	508.5	508.7	509.0	509.2
25°	491.9	493.4	494.9	495.7	495.8	496.0	496.1	496.2
27.5°	477.4	478.7	480.1	480.9	481.1	481.3	481.4	481.6
30°	467.2	468.7	470.2	471.1	471.3	471.7	471.9	472.2
32.5°	456.8	458.5	460.3	461.2	461.5	461.8	462.1	462.3
35°	440.3	442.2	444.1	445.3	445.7	446.1	446.5	446.9
37.5°	423.1	425.0	427.0	428.2	428.6	429.0	429.4	429.9
40°	411.0	413.0	415.1	416.4	416.9	417.5	418.0	418.6
42.5°	399.1	401.3	403.6	405.0	405.4	405.8	406.3	406.7
45°	380.7	383.0	385.3	386.8	387.5	388.2	388.9	389.6
47.5°	361.2	363.7	366.1	367.7	368.5	369.3	370.2	371.0
50°	347.6	350.4	353.1	354.9	355.7	356.5	357.4	358.1
52.5°	333.8	336.5	339.3	341.0	341.9	342.7	343.5	344.4
55°	313.1	315.8	318.5	320.4	321.2	322.0	322.8	323.6
57.5°	291.3	294.6	297.9	299.8	300.6	301.3	302.1	302.9
60°	276.3	279.5	282.6	284.7	285.8	286.9	288.0	289.1
62.5°	261.5	264.7	267.8	269.9	271.0	272.1	273.2	274.3
65°	238.6	242.1	245.5	247.7	248.8	249.9	251.0	252.2
67.5°	216.2	219.7	223.2	225.4	226.5	227.5	228.6	229.7
70°	200.3	204.1	207.7	210.1	211.0	212.0	212.9	213.9
72.5°	185.3	188.9	192.5	194.8	195.9	196.9	198.0	199.1
75°	162.4	166.2	170.1	172.6	173.8	175.1	176.3	177.5
77.5°	141.1	145.0	148.9	151.5	152.7	154.1	155.3	156.7
80°	127.2	131.3	135.4	138.0	139.1	140.2	141.3	142.4
82.5°	113.6	117.8	122.1	124.8	126.0	127.1	128.3	129.6
85°	94.5	98.6	102.7	105.5	106.9	108.2	109.6	111.0
87.5°	79.9	84.1	88.1	90.7	92.0	93.2	94.4	95.6
90°	77.1	81.5	86.0	88.5	90.1	91.6	92.2	93.3
92.5°	154.6	136.4	126.7	120.1	115.9	114.5	114.1	115.2
95°	395.9	329.5	272.7	231.3	210.4	197.6	190.8	186.1
97.5°	551.8	529.3	488.7	443.9	412.6	386.6	374.2	366.0
100°	599.2	612.0	593.5	562.4	524.0	497.5	484.9	482.2
102.5°	594.1	642.5	652.4	640.9	617.8	598.9	585.7	583.8
105°	553.7	635.3	683.4	704.3	706.2	703.7	698.5	696.9
107.5°	498.4	584.9	651.3	693.8	717.2	728.4	734.0	736.1
110°	464.9	546.2	614.9	666.7	699.9	719.9	729.2	734.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	439.4	511.6	576.6	628.3	665.8	689.9	702.3	710.0
115°	412.8	471.3	527.3	572.7	609.3	637.4	652.8	657.4
117.5°	397.5	446.4	490.8	529.6	561.1	585.0	600.7	604.7
120°	389.8	434.6	473.5	507.5	534.3	555.3	568.2	574.3
122.5°	383.0	426.4	462.0	491.9	514.7	532.7	543.6	549.5
125°	372.2	413.7	447.5	474.0	493.0	506.9	516.3	519.8
127.5°	359.3	398.9	432.4	457.6	476.8	489.3	497.6	501.2
130°	349.5	387.7	420.9	446.5	465.8	477.9	486.0	489.6
132.5°	339.8	375.7	408.0	433.6	452.5	466.1	473.8	477.3
135°	325.3	357.0	386.7	410.7	429.7	443.1	451.2	454.7
137.5°	312.7	339.5	364.7	386.5	404.1	417.2	423.9	427.9
140°	305.3	328.4	350.5	370.7	387.1	397.8	404.8	409.1
142.5°	298.8	319.1	338.1	355.6	370.2	380.0	386.2	389.3
145°	289.9	306.2	320.5	333.8	345.7	353.9	359.0	361.8
147.5°	282.7	294.9	305.9	316.2	324.9	331.9	335.8	337.1
150°	278.8	289.2	298.3	306.4	313.6	319.5	322.2	322.7
152.5°	274.8	283.8	292.1	298.8	304.9	309.7	311.3	311.8
155°	268.9	276.1	282.9	288.3	292.9	296.4	297.8	297.8
157.5°	262.4	268.5	274.2	278.5	282.0	284.7	285.5	285.5
160°	258.5	263.5	268.4	272.0	274.7	277.5	277.9	277.9
162.5°	254.5	258.7	262.6	265.9	267.9	270.6	271.1	270.7
165°	249.0	251.7	254.8	257.1	259.0	260.7	260.3	259.8
167.5°	243.7	245.7	248.3	249.6	250.6	251.7	251.6	251.3
170°	240.4	241.8	243.6	244.9	245.8	246.3	245.8	245.8
172.5°	237.5	238.5	239.6	240.6	241.1	241.6	241.1	240.4
175°	233.6	234.1	235.0	235.0	235.0	235.9	235.0	234.1
177.5°	231.1	231.5	231.5	231.8	231.5	231.8	231.1	230.4
180°	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0

(END OF REPORT)