

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: P331371-940

Luminaire Tested: **S122DIP-S675D1080U940-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331371-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIP-S675D1080U940-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1080 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6149.5 lumens
Efficiency: N/A
Efficacy: 108.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

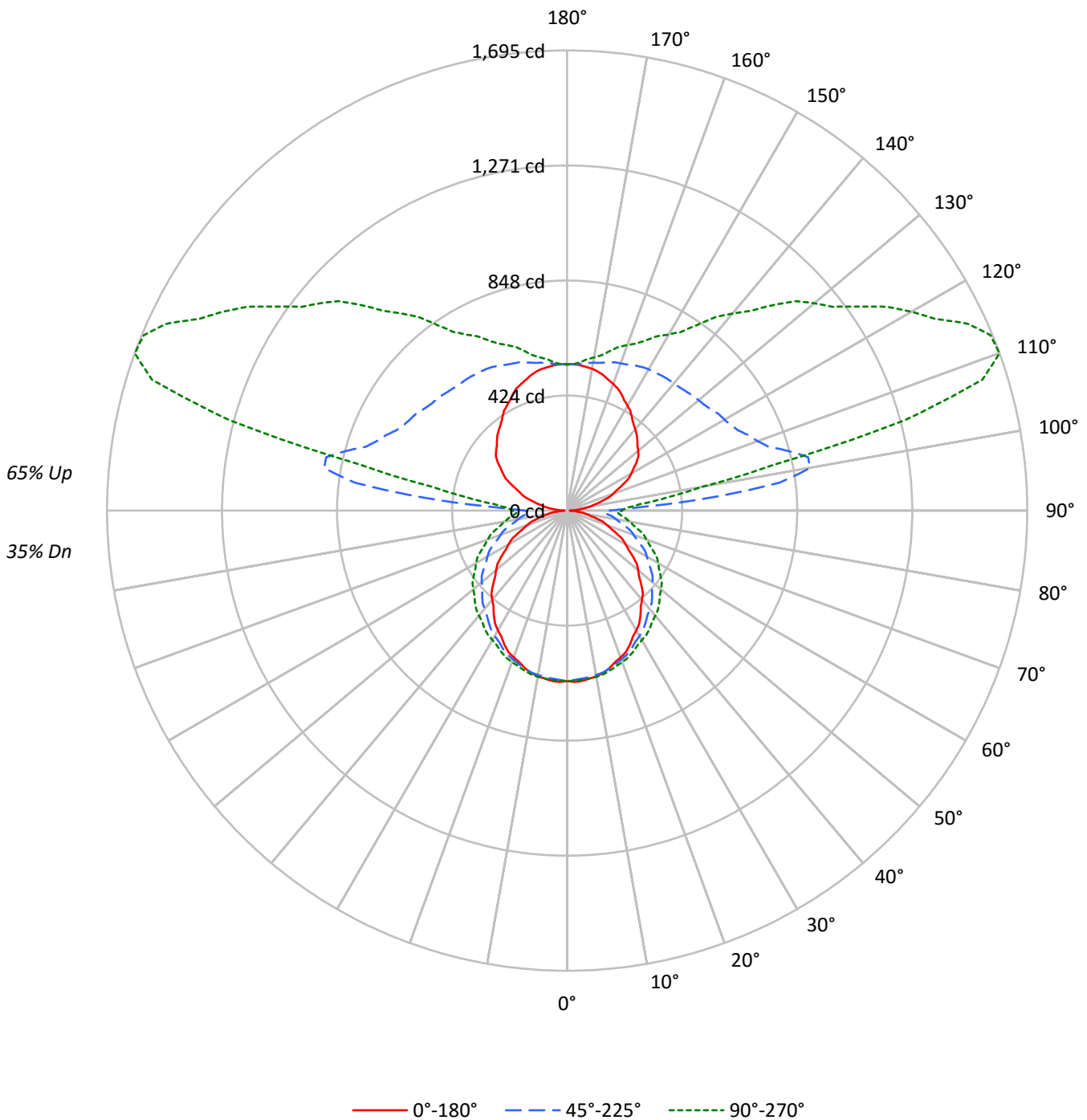
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	75	75	75	58	58	58	42	42	42	35
1	93	89	84	81	84	80	76	73	64	61	59	49	47	46	35	34	33	27
2	84	77	70	65	76	69	64	59	55	51	48	42	40	37	31	29	27	22
3	77	67	60	54	69	61	54	49	48	44	40	37	34	31	27	25	23	18
4	70	59	51	45	63	53	46	41	43	38	34	33	29	26	24	21	19	15
5	64	52	44	38	57	47	40	35	38	33	29	29	26	23	21	19	17	13
6	59	47	39	33	53	42	35	30	34	29	25	26	23	20	19	17	14	11
7	54	42	34	28	49	38	31	26	31	25	22	24	20	17	17	15	13	10
8	50	38	30	25	45	35	28	23	28	23	19	22	18	15	16	13	11	9
9	47	35	27	22	42	31	25	20	26	20	17	20	16	14	15	12	10	8
10	44	32	24	20	39	29	22	18	23	18	15	18	15	12	14	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10141	10141	10141
5°	10191	9762	9724
10°	10126	9474	9367
15°	9987	9168	8990
20°	9810	8841	8627
25°	9637	8525	8298
30°	9392	8201	7967
35°	9142	7888	7735
40°	8880	7621	7501
45°	8632	7383	7302
50°	8365	7166	7106
55°	8089	6934	6906
60°	7745	6695	6695
65°	7391	6412	6445
70°	6992	6110	6173
75°	6483	5811	5925
80°	5680	5509	5672
85°	4908	5245	5473



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.5	1.0
10°-20°	170.7	2.8
20°-30°	258.6	4.2
30°-40°	315.0	5.1
40°-50°	338.9	5.5
50°-60°	329.1	5.4
60°-70°	287.4	4.7
70°-80°	221.2	3.6
80°-90°	153.3	2.5
90°-100°	317.7	5.2
100°-110°	805.6	13.1
110°-120°	825.8	13.4
120°-130°	666.7	10.8
130°-140°	524.8	8.5
140°-150°	389.9	6.3
150°-160°	272.6	4.4
160°-170°	160.5	2.6
170°-180°	52.2	0.8
0°-30°	488.8	7.9
0°-40°	803.8	13.1
0°-60°	1471.8	23.9
0°-90°	2133.7	34.7
90°-120°	1949.0	31.7
90°-150°	3530.4	57.4
90°-180°	4016.0	65.3
0°-180°	6149.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	628	628	628	628	628	
5°	630	627	622	627	626	60
15°	601	602	603	610	610	169
25°	546	553	561	571	574	251
35°	471	486	503	523	530	294
45°	386	411	442	470	480	298
55°	296	329	376	408	420	264
65°	202	247	300	336	350	201
75°	112	163	221	259	272	118
85°	33	89	148	184	198	35
90°	10	76	155	189	202	8
95°	44	140	511	291	268	44
105°	131	223	846	1481	1288	140
115°	226	297	697	1406	1628	224
125°	312	371	648	1128	1310	278
135°	366	436	620	931	1069	283
145°	416	479	607	759	835	261
155°	473	511	589	667	693	218
165°	516	531	564	599	608	145
175°	538	538	543	550	548	51
180°	539	539	539	539	539	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	631.8	631.2	630.8	630.3	629.8	629.0	627.9	626.7	625.6	624.5	625.3
5°	629.9	629.3	628.7	628.1	627.5	626.6	625.4	624.2	622.9	621.7	622.9
7.5°	624.3	623.8	623.5	623.0	622.7	622.0	621.1	620.1	619.2	618.3	619.7
10°	619.9	619.5	619.1	618.7	618.3	617.8	617.2	616.6	616.0	615.4	617.0
12.5°	612.6	612.7	612.8	612.9	613.0	612.8	612.3	611.9	611.4	611.0	612.6
15°	600.8	601.2	601.6	602.0	602.4	602.6	602.6	602.6	602.6	602.6	604.4
17.5°	585.5	586.4	587.2	588.1	588.9	589.7	590.3	590.9	591.6	592.3	594.1
20°	575.3	576.3	577.3	578.4	579.3	580.2	581.0	581.9	582.7	583.5	585.8
22.5°	564.4	565.5	566.8	567.9	569.1	570.2	571.4	572.5	573.6	574.8	577.0
25°	546.2	547.6	549.0	550.5	551.9	553.5	555.3	557.1	558.9	560.7	563.2
27.5°	524.3	526.6	529.0	531.3	533.6	535.8	538.0	540.1	542.2	544.4	547.4
30°	509.8	512.4	515.1	517.6	520.3	522.9	525.6	528.2	530.8	533.4	536.6
32.5°	493.7	496.7	499.6	502.6	505.6	508.6	511.8	514.8	517.9	521.0	524.8
35°	470.6	474.0	477.5	480.9	484.4	488.0	491.9	495.7	499.5	503.4	507.8
37.5°	445.5	449.5	453.4	457.4	461.4	465.8	470.8	475.8	480.7	485.7	490.7
40°	428.7	433.2	437.7	442.1	446.6	451.5	457.0	462.4	467.9	473.3	478.6
42.5°	412.8	417.1	421.6	426.1	430.5	435.9	442.2	448.4	454.7	461.0	466.7
45°	385.9	391.5	396.9	402.3	407.8	414.1	421.2	428.3	435.3	442.4	448.7
47.5°	359.5	365.5	371.5	377.4	383.3	390.5	398.8	407.1	415.4	423.7	430.3
50°	341.3	347.7	353.9	360.2	366.4	374.2	383.3	392.4	401.4	410.5	417.4
52.5°	323.9	330.5	337.1	343.7	350.3	358.4	367.9	377.6	387.1	396.7	403.8
55°	295.9	303.1	310.4	317.7	324.9	333.9	344.4	354.9	365.4	375.9	383.3
57.5°	268.1	276.4	284.6	292.8	301.0	310.5	321.2	331.9	342.7	353.4	361.2
60°	248.5	257.2	265.9	274.6	283.3	293.5	305.0	316.5	328.0	339.6	347.2
62.5°	231.0	240.0	249.1	258.1	267.2	277.4	288.9	300.4	312.0	323.5	331.7
65°	202.1	212.0	221.9	231.8	241.7	252.6	264.6	276.5	288.5	300.4	308.7
67.5°	175.5	185.8	196.3	206.6	217.0	228.2	240.4	252.6	264.8	277.1	285.4
70°	156.6	167.1	177.6	188.2	198.7	210.2	222.7	235.2	247.8	260.4	269.0
72.5°	139.1	149.9	160.8	171.7	182.4	194.2	207.0	219.6	232.4	245.0	253.6
75°	112.0	123.3	134.6	146.0	157.3	169.4	182.4	195.3	208.2	221.2	229.9
77.5°	85.8	97.6	109.5	121.3	133.1	145.7	158.8	172.0	185.1	198.2	207.0
80°	68.3	80.6	92.9	105.3	117.6	130.4	143.6	156.7	169.8	183.0	191.5
82.5°	53.7	65.9	78.0	90.2	102.5	115.1	128.5	141.8	155.1	168.4	176.9
85°	32.8	45.3	57.9	70.4	82.9	95.7	108.6	121.5	134.6	147.5	156.0
87.5°	18.0	30.8	43.6	56.1	68.6	81.7	95.7	110.0	124.2	137.4	145.4
90°	10.2	25.0	40.8	54.7	68.5	83.9	102.0	122.3	141.4	155.3	162.5
92.5°	21.0	37.5	55.9	71.4	89.3	110.8	146.7	192.1	234.0	248.3	235.2
95°	43.5	57.2	77.0	95.9	122.0	157.7	217.4	319.7	452.0	510.8	467.7
97.5°	65.5	79.5	98.9	121.5	149.0	187.2	258.7	395.9	607.3	790.1	831.5
100°	86.1	96.8	113.5	137.6	165.8	204.2	270.5	408.1	643.2	909.4	1066.0
102.5°	104.5	113.6	129.7	153.2	181.6	219.5	281.2	404.5	622.7	908.4	1150.3
105°	130.9	141.0	154.1	175.5	204.1	241.3	300.5	403.2	584.7	845.9	1128.5
107.5°	160.6	168.6	180.3	199.3	226.6	263.1	320.5	411.0	562.3	779.5	1029.8
110°	179.8	188.0	198.2	215.7	241.5	278.5	334.0	418.5	554.8	747.0	968.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	198.0	205.5	216.0	232.0	256.3	293.6	347.0	426.8	551.0	723.7	923.0
115°	226.3	233.7	242.2	256.8	279.8	313.4	367.1	439.3	548.9	696.9	866.6
117.5°	254.9	260.5	268.1	280.5	301.9	335.8	385.5	453.2	549.7	679.7	828.0
120°	273.1	278.0	285.1	295.2	316.7	350.2	398.7	462.7	550.5	669.5	806.7
122.5°	290.5	294.2	300.7	311.1	332.2	366.0	411.5	470.9	552.5	661.8	788.1
125°	312.5	315.7	321.9	334.3	355.1	387.3	431.1	484.1	554.8	648.4	760.5
127.5°	330.8	334.7	343.2	356.7	376.4	408.8	450.2	497.3	558.5	638.3	734.9
130°	341.6	345.5	355.7	370.0	390.5	421.5	462.0	505.6	561.7	632.2	717.9
132.5°	351.5	356.3	367.3	382.5	403.8	434.3	472.2	514.0	564.9	627.1	703.4
135°	365.5	369.7	382.1	397.6	421.5	451.5	486.7	525.0	568.4	620.2	683.4
137.5°	379.6	384.6	397.0	413.5	437.0	464.4	498.0	532.7	571.3	614.7	667.9
140°	390.4	394.3	406.5	422.9	445.5	472.5	504.1	536.5	572.2	610.9	658.7
142.5°	401.2	404.3	415.7	432.0	453.8	479.0	509.3	540.7	573.5	609.5	650.8
145°	416.4	420.5	431.0	446.5	467.2	490.0	517.9	547.0	576.0	607.0	641.4
147.5°	433.8	436.9	446.8	461.2	478.4	498.6	525.0	550.5	576.8	603.3	632.5
150°	445.4	448.5	456.8	470.3	485.8	504.4	528.3	552.1	576.0	600.8	625.6
152.5°	457.0	458.5	466.7	478.6	493.3	510.2	531.6	552.9	574.3	596.6	619.8
155°	473.4	474.4	480.6	492.0	503.5	519.0	536.5	554.2	571.8	589.4	609.1
157.5°	487.1	488.1	493.1	503.0	512.1	525.2	540.1	554.2	567.0	581.9	599.0
160°	496.1	497.2	501.3	509.6	517.9	529.3	541.8	554.2	564.5	577.0	591.5
162.5°	505.3	504.7	508.8	515.4	522.9	531.8	542.6	553.4	562.0	572.8	584.9
165°	515.9	514.9	516.9	523.1	528.3	534.5	543.9	551.1	557.3	564.5	573.9
167.5°	524.6	523.3	525.2	529.1	532.9	536.8	543.6	549.7	552.5	557.3	563.1
170°	530.4	528.3	529.3	532.4	534.5	537.6	542.8	548.0	550.0	553.1	557.3
172.5°	533.7	532.4	531.8	534.9	536.2	538.4	542.0	545.5	546.7	548.2	551.5
175°	537.6	536.5	535.6	537.6	537.6	538.7	540.7	542.8	541.8	542.8	543.9
177.5°	539.5	537.8	537.0	538.7	538.7	538.7	539.5	541.2	539.5	538.7	539.5
180°	538.7	538.7	538.7	538.7	538.7	538.7	538.7	538.7	538.7	538.7	538.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	626.1	626.9	627.7	627.9	627.6	627.3	627.0	626.7
5°	624.2	625.4	626.6	627.1	626.9	626.7	626.5	626.2
7.5°	621.2	622.7	624.1	624.7	624.6	624.3	624.1	623.9
10°	618.6	620.2	621.9	622.5	622.3	622.1	622.0	621.7
12.5°	614.2	615.8	617.5	618.1	618.0	617.8	617.6	617.3
15°	606.3	608.1	609.9	610.7	610.6	610.3	610.1	609.9
17.5°	596.0	598.0	599.9	600.8	600.8	600.8	600.8	600.8
20°	588.0	590.2	592.4	593.5	593.5	593.5	593.5	593.5
22.5°	579.3	581.5	583.6	585.0	585.2	585.6	585.9	586.2
25°	565.6	568.0	570.4	571.9	572.6	573.2	573.8	574.4
27.5°	550.5	553.6	556.7	558.4	558.8	559.3	559.7	560.2
30°	539.9	543.1	546.4	548.3	548.9	549.6	550.1	550.7
32.5°	528.5	532.3	535.9	538.3	539.5	540.6	541.6	542.7
35°	512.3	516.7	521.2	524.1	525.6	527.0	528.3	529.8
37.5°	495.6	500.5	505.5	508.7	510.2	511.7	513.2	514.7
40°	483.8	489.1	494.4	497.9	499.7	501.6	503.4	505.2
42.5°	472.4	478.2	483.9	487.8	489.5	491.4	493.2	495.0
45°	455.0	461.2	467.5	471.6	473.7	475.7	477.7	479.7
47.5°	436.8	443.4	449.9	454.2	456.5	458.7	460.9	463.2
50°	424.3	431.1	438.1	442.6	444.9	447.1	449.2	451.5
52.5°	410.8	417.9	424.9	429.6	431.9	434.4	436.8	439.2
55°	390.5	397.8	405.1	410.0	412.7	415.3	417.9	420.5
57.5°	369.1	376.9	384.8	390.0	392.7	395.4	398.1	400.7
60°	354.9	362.6	370.3	375.6	378.4	381.2	384.1	386.9
62.5°	339.8	348.0	356.2	361.7	364.3	366.9	369.6	372.3
65°	317.0	325.3	333.6	339.0	341.7	344.3	347.0	349.6
67.5°	293.8	302.2	310.6	316.2	318.9	321.6	324.4	327.2
70°	277.8	286.4	295.2	300.7	303.1	305.6	308.0	310.4
72.5°	262.2	270.6	279.2	284.9	287.8	290.8	293.6	296.6
75°	238.6	247.3	256.0	261.6	264.3	266.9	269.6	272.2
77.5°	215.6	224.3	232.9	238.6	241.5	244.3	247.1	249.9
80°	199.9	208.5	217.0	222.7	225.4	228.3	231.1	234.0
82.5°	185.4	193.9	202.4	207.9	210.6	213.3	216.0	218.6
85°	164.4	173.0	181.5	187.1	189.9	192.8	195.6	198.4
87.5°	153.5	161.3	170.0	175.7	178.3	180.8	183.4	186.0
90°	169.5	175.5	185.7	192.0	194.4	196.8	199.2	201.7
92.5°	219.8	214.9	214.1	212.9	214.5	213.6	216.9	217.6
95°	391.5	336.0	300.1	282.4	271.3	265.5	264.8	268.3
97.5°	745.2	637.5	532.9	463.0	415.9	392.8	380.0	373.7
100°	1051.8	930.8	796.4	675.9	592.1	549.8	522.0	505.6
102.5°	1251.0	1229.3	1132.8	1004.9	913.6	839.8	804.6	781.5
105°	1351.0	1475.2	1495.8	1466.2	1404.2	1342.2	1299.8	1287.6
107.5°	1265.1	1448.2	1562.7	1617.4	1627.7	1626.4	1619.7	1602.7
110°	1192.9	1384.8	1523.9	1613.2	1660.0	1681.9	1693.4	1694.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1126.6	1311.0	1459.2	1560.9	1625.1	1660.2	1680.1	1687.8
115°	1043.6	1209.2	1350.9	1461.8	1537.6	1587.4	1616.6	1628.2
117.5°	979.2	1125.2	1254.3	1358.3	1435.5	1487.8	1518.3	1528.2
120°	946.0	1080.1	1195.6	1293.8	1368.5	1419.4	1451.7	1464.3
122.5°	918.9	1042.1	1151.6	1240.5	1307.4	1357.2	1385.8	1396.4
125°	878.9	991.0	1087.6	1168.9	1230.8	1272.0	1299.8	1309.9
127.5°	839.3	940.8	1031.9	1107.0	1161.1	1199.8	1224.0	1232.3
130°	813.9	907.9	994.5	1066.1	1118.5	1155.3	1177.7	1187.6
132.5°	789.3	876.5	956.4	1023.8	1075.3	1112.1	1132.8	1141.8
135°	755.0	827.6	900.3	961.2	1007.4	1043.1	1063.5	1069.2
137.5°	726.5	787.4	845.4	898.5	940.5	971.3	989.0	996.7
140°	708.6	761.5	812.3	860.2	894.6	922.7	939.4	946.9
142.5°	694.2	739.0	782.7	822.6	855.2	880.7	895.5	897.9
145°	674.7	710.1	743.4	774.6	800.5	819.0	830.5	834.6
147.5°	660.0	687.1	712.3	734.6	755.5	770.2	777.7	780.1
150°	650.5	673.3	695.1	713.7	729.2	741.7	747.9	748.9
152.5°	641.4	662.5	681.0	697.1	709.4	720.1	724.7	724.9
155°	628.7	645.3	660.8	672.3	683.7	690.9	695.1	693.0
157.5°	614.0	627.9	641.0	649.9	658.0	664.0	665.8	665.8
160°	604.9	616.4	627.8	635.0	642.2	647.4	648.5	648.5
162.5°	595.8	605.6	615.3	620.9	628.1	631.7	632.7	631.9
165°	582.2	589.4	596.6	600.8	604.9	609.1	609.1	608.1
167.5°	569.1	574.7	579.7	583.4	585.2	587.5	587.4	586.1
170°	562.5	565.6	569.7	571.8	572.8	576.0	574.9	572.8
172.5°	555.0	557.3	560.6	561.9	562.9	564.4	563.3	562.0
175°	547.0	548.0	549.0	550.0	550.0	551.1	550.0	548.0
177.5°	541.2	541.2	542.0	542.0	542.0	542.0	541.2	539.5
180°	538.7	538.7	538.7	538.7	538.7	538.7	538.7	538.7

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