

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: P331416

Luminaire Tested: **S122DIP-S865D1080U835-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331416
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-S865D1080U835-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 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: 7702.0 lumens
Efficiency: N/A
Efficacy: 117.8 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: General Diffuse

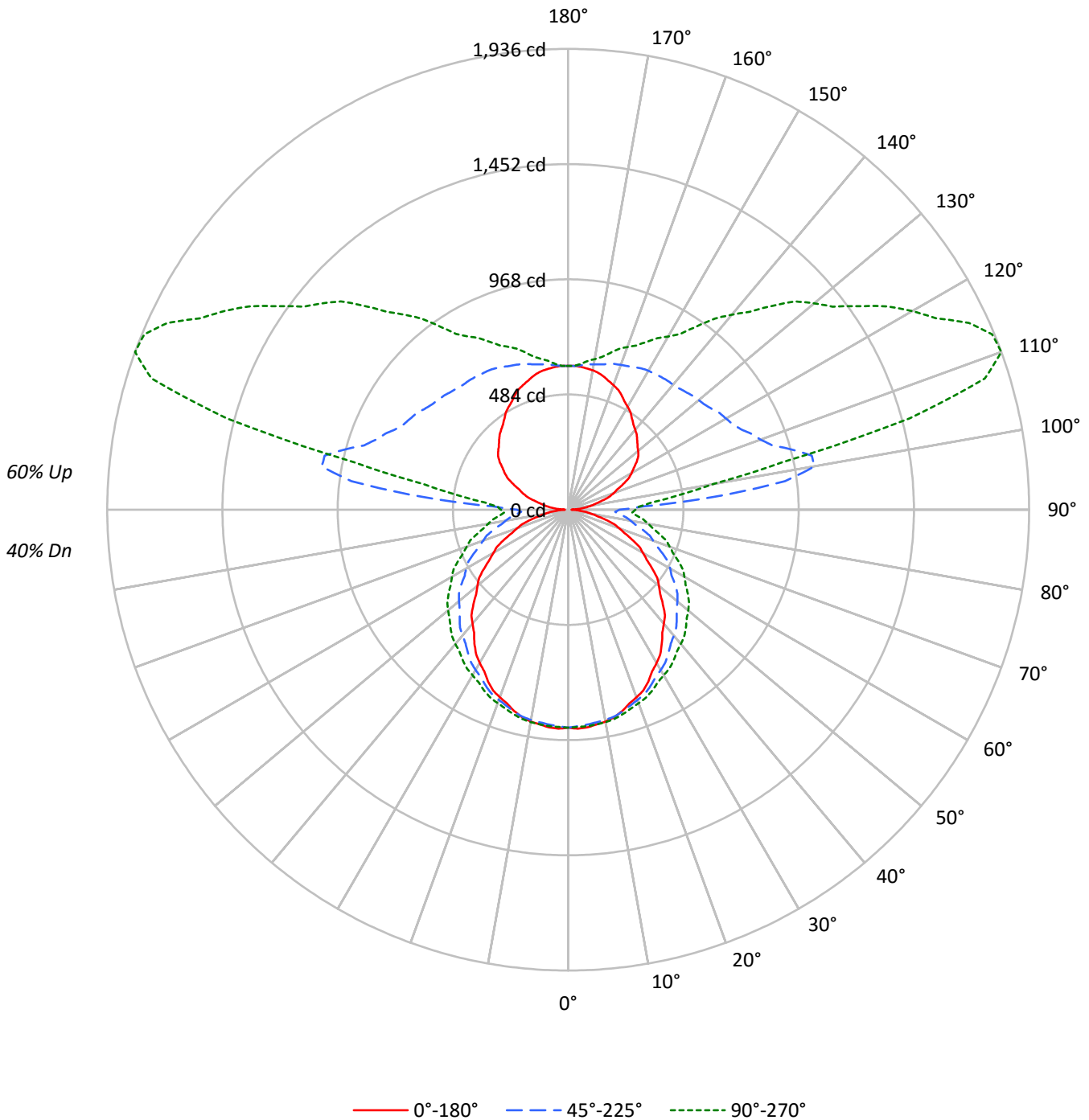
Input Watts (W): 65.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47	40
1	94	90	85	81	86	82	78	75	66	64	61	53	51	49	40	39	37	31
2	85	78	71	65	77	71	65	60	58	53	50	45	43	40	34	32	31	25
3	78	68	60	54	70	62	55	50	50	45	41	40	36	33	30	28	26	21
4	71	60	51	45	64	54	47	42	44	39	35	35	31	28	27	24	22	18
5	65	53	45	38	59	48	41	35	40	34	30	31	27	24	24	21	19	15
6	60	47	39	33	54	43	36	31	35	30	26	28	24	21	21	19	16	13
7	55	42	34	29	50	39	32	27	32	26	22	26	21	18	20	17	14	12
8	51	38	31	25	46	35	28	23	29	24	20	23	19	16	18	15	13	10
9	47	35	27	22	43	32	25	21	27	21	18	21	17	14	16	14	11	9
10	44	32	25	20	40	29	23	18	24	19	16	20	16	13	15	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14783	14783	14783
5°	14855	14230	14176
10°	14762	13809	13655
15°	14558	13364	13106
20°	14300	12888	12577
25°	14048	12428	12096
30°	13689	11955	11614
35°	13327	11498	11275
40°	12947	11110	10935
45°	12584	10762	10645
50°	12196	10448	10360
55°	11790	10109	10067
60°	11292	9759	9760
65°	10774	9347	9393
70°	10189	8905	8999
75°	9446	8470	8637
80°	8274	8029	8266
85°	7152	7646	7981



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.8	1.1
10°-20°	248.8	3.2
20°-30°	377.0	4.9
30°-40°	459.2	6.0
40°-50°	494.0	6.4
50°-60°	479.7	6.2
60°-70°	418.9	5.4
70°-80°	322.5	4.2
80°-90°	221.9	2.9
90°-100°	390.6	5.1
100°-110°	928.5	12.1
110°-120°	942.6	12.2
120°-130°	756.9	9.8
130°-140°	592.5	7.7
140°-150°	437.9	5.7
150°-160°	305.7	4.0
160°-170°	180.0	2.3
170°-180°	58.6	0.8
0°-30°	712.5	9.3
0°-40°	1171.7	15.2
0°-60°	2145.5	27.9
0°-90°	3108.7	40.4
90°-120°	2261.8	29.4
90°-150°	4049.1	52.6
90°-180°	4593.0	59.6
0°-180°	7702.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	916	916	916	916	916	
5°	918	914	906	914	913	87
15°	876	878	878	890	889	247
25°	796	806	817	833	837	366
35°	686	709	734	762	772	429
45°	563	599	645	684	699	434
55°	431	480	548	594	613	385
65°	295	360	438	490	510	293
75°	163	238	322	377	397	173
85°	48	130	215	269	289	51
90°	14	106	215	264	282	11
95°	51	174	608	373	351	52
105°	148	261	975	1697	1484	158
115°	255	338	800	1604	1857	252
125°	351	417	738	1284	1490	312
135°	410	490	699	1053	1211	317
145°	467	537	681	853	939	293
155°	531	573	661	748	777	244
165°	578	596	633	671	682	163
175°	603	604	609	616	614	57
180°	604	604	604	604	604	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6
2.5°	920.9	920.2	919.5	918.8	918.1	916.9	915.2	913.6	911.9	910.3	911.5
5°	918.2	917.4	916.5	915.6	914.7	913.4	911.6	909.8	908.1	906.3	908.1
7.5°	910.0	909.4	908.8	908.3	907.7	906.7	905.3	904.0	902.6	901.3	903.4
10°	903.7	903.1	902.5	901.9	901.3	900.6	899.7	898.8	897.9	897.0	899.4
12.5°	893.0	893.2	893.3	893.4	893.5	893.2	892.6	891.9	891.3	890.6	893.0
15°	875.8	876.4	877.0	877.6	878.1	878.4	878.4	878.4	878.4	878.4	881.1
17.5°	853.5	854.7	856.0	857.2	858.4	859.5	860.5	861.4	862.4	863.3	866.1
20°	838.6	840.1	841.6	843.1	844.5	845.9	847.0	848.2	849.4	850.6	853.8
22.5°	822.7	824.4	826.1	827.8	829.5	831.2	832.9	834.5	836.2	837.8	841.1
25°	796.2	798.2	800.3	802.4	804.4	806.8	809.4	812.1	814.7	817.4	820.9
27.5°	764.3	767.7	771.0	774.4	777.8	781.0	784.1	787.3	790.4	793.5	798.0
30°	743.1	746.9	750.8	754.6	758.4	762.3	766.1	769.9	773.8	777.6	782.3
32.5°	719.7	724.0	728.3	732.7	737.0	741.4	745.9	750.5	755.0	759.5	765.0
35°	686.0	691.0	696.1	701.1	706.1	711.4	717.0	722.6	728.2	733.8	740.3
37.5°	649.4	655.2	661.0	666.7	672.5	679.0	686.3	693.6	700.8	708.1	715.3
40°	625.0	631.5	638.0	644.5	650.9	658.2	666.1	674.1	682.1	690.0	697.7
42.5°	601.6	608.1	614.6	621.1	627.6	635.4	644.5	653.7	662.8	672.0	680.3
45°	562.6	570.6	578.5	586.5	594.5	603.6	613.9	624.3	634.6	644.9	654.0
47.5°	524.1	532.8	541.5	550.2	558.8	569.2	581.3	593.4	605.5	617.6	627.1
50°	497.6	506.7	515.9	525.0	534.2	545.4	558.6	571.9	585.2	598.5	608.5
52.5°	472.1	481.7	491.4	501.0	510.6	522.4	536.4	550.3	564.3	578.3	588.5
55°	431.3	441.9	452.5	463.1	473.7	486.7	502.0	517.4	532.7	548.0	558.6
57.5°	390.9	402.9	414.9	426.8	438.8	452.6	468.2	483.9	499.5	515.1	526.6
60°	362.3	374.9	387.6	400.3	413.0	427.7	444.5	461.3	478.1	495.0	506.2
62.5°	336.8	349.9	363.1	376.2	389.4	404.4	421.2	438.0	454.8	471.6	483.5
65°	294.6	309.0	323.5	337.9	352.4	368.3	385.7	403.1	420.5	437.9	450.0
67.5°	255.8	270.9	286.0	301.1	316.2	332.7	350.5	368.3	386.1	403.9	416.1
70°	228.2	243.6	258.9	274.2	289.6	306.4	324.7	342.9	361.2	379.5	392.2
72.5°	202.8	218.6	234.4	250.2	266.0	283.1	301.7	320.2	338.7	357.2	369.7
75°	163.2	179.7	196.2	212.8	229.3	247.0	265.8	284.7	303.6	322.4	335.1
77.5°	125.0	142.3	159.6	176.8	194.1	212.3	231.5	250.7	269.8	289.0	301.6
80°	99.5	117.5	135.5	153.5	171.5	190.0	209.2	228.4	247.5	266.7	279.1
82.5°	78.3	96.0	113.8	131.5	149.3	167.9	187.3	206.7	226.1	245.5	257.9
85°	47.8	66.1	84.3	102.6	120.9	139.5	158.3	177.2	196.1	215.0	227.4
87.5°	26.2	44.5	63.0	81.1	99.1	118.0	138.0	158.5	178.8	197.9	209.7
90°	14.4	35.0	56.8	76.2	95.6	117.1	141.8	168.8	194.6	214.7	225.3
92.5°	26.4	48.6	72.9	93.9	117.7	145.7	190.1	245.2	296.4	316.6	304.7
95°	51.3	69.8	95.3	119.6	152.0	195.7	266.8	385.6	538.0	608.0	562.3
97.5°	75.5	94.1	118.7	146.9	180.6	226.8	310.9	468.7	709.7	918.6	967.6
100°	98.7	113.1	134.5	164.0	198.1	244.4	322.5	480.7	748.1	1050.4	1228.6
102.5°	119.1	131.6	152.0	180.5	214.7	260.2	333.2	475.1	723.5	1047.6	1321.3
105°	148.4	161.6	178.2	204.2	238.3	282.8	352.7	471.4	678.5	974.9	1294.2
107.5°	181.5	192.1	206.8	229.7	261.9	305.4	373.1	477.9	651.0	898.1	1181.0
110°	202.8	213.3	226.2	247.2	277.5	321.4	386.9	485.0	641.2	860.1	1110.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	223.2	232.8	245.7	264.8	293.2	337.2	400.2	492.9	635.4	832.2	1057.9
115°	255.1	264.1	274.3	291.5	318.0	357.6	420.8	505.0	630.9	799.9	992.2
117.5°	286.7	293.5	302.6	317.0	341.5	381.2	439.7	518.4	629.4	778.1	946.4
120°	307.2	313.0	321.2	332.8	357.2	396.2	453.3	527.8	629.1	765.2	921.0
122.5°	326.7	330.9	338.3	350.2	373.9	413.1	466.7	535.9	629.9	755.1	898.6
125°	351.2	354.6	361.6	375.6	398.8	436.0	487.3	549.0	630.5	737.5	865.1
127.5°	371.6	376.0	385.4	400.5	422.5	459.6	507.8	562.4	632.7	724.0	834.0
130°	383.7	388.0	399.4	415.3	438.3	473.7	520.6	570.9	635.2	715.7	813.4
132.5°	394.8	400.1	412.4	429.3	453.1	487.9	531.5	579.5	637.7	708.4	795.7
135°	410.2	414.9	428.8	446.2	473.0	507.0	547.1	590.7	640.1	698.8	771.2
137.5°	426.0	431.6	445.4	464.0	490.4	521.2	559.2	598.4	642.0	690.9	751.8
140°	438.1	442.5	456.1	474.4	499.7	530.0	565.5	602.1	642.1	685.7	740.4
142.5°	450.2	453.6	466.3	484.6	509.0	537.2	571.3	606.5	643.3	683.6	730.8
145°	467.0	471.6	483.3	500.7	523.9	549.5	580.8	613.4	645.9	680.7	719.7
147.5°	486.5	490.0	501.1	517.2	536.5	559.2	588.7	617.3	646.8	676.6	709.3
150°	499.5	503.0	512.3	527.4	544.8	565.7	592.5	619.2	645.9	673.8	701.6
152.5°	512.5	514.2	523.4	536.7	553.2	572.2	596.2	620.1	644.0	669.1	695.1
155°	530.9	532.0	539.0	551.8	564.6	582.0	601.7	621.5	641.2	661.0	683.1
157.5°	546.2	547.4	553.0	564.1	574.3	589.0	605.7	621.5	635.9	652.6	671.7
160°	556.4	557.6	562.2	571.5	580.8	593.6	607.6	621.5	633.1	647.1	663.3
162.5°	566.7	566.0	570.6	578.0	586.4	596.4	608.5	620.6	630.3	642.4	655.9
165°	578.5	577.4	579.7	586.6	592.5	599.4	609.9	618.0	625.0	633.1	643.6
167.5°	588.3	586.9	589.0	593.4	597.6	602.0	609.6	616.4	619.6	625.0	631.5
170°	594.8	592.5	593.6	597.1	599.4	602.9	608.7	614.5	616.8	620.3	625.0
172.5°	598.5	597.1	596.4	599.9	601.3	603.8	607.8	611.7	613.1	614.8	618.5
175°	602.9	601.7	600.6	602.9	602.9	604.1	606.4	608.7	607.6	608.7	609.9
177.5°	605.0	603.1	602.2	604.1	604.1	604.1	605.0	606.9	605.0	604.1	605.0
180°	604.1	604.1	604.1	604.1	604.1	604.1	604.1	604.1	604.1	604.1	604.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6
2.5°	912.6	913.8	915.0	915.4	914.9	914.4	913.9	913.5
5°	909.8	911.6	913.4	914.1	913.8	913.5	913.2	912.9
7.5°	905.5	907.6	909.8	910.7	910.4	910.1	909.8	909.5
10°	901.7	904.1	906.5	907.5	907.2	906.9	906.6	906.3
12.5°	895.4	897.7	900.1	901.1	900.8	900.5	900.2	899.9
15°	883.7	886.4	889.1	890.2	889.9	889.6	889.3	889.1
17.5°	868.9	871.6	874.4	875.8	875.8	875.8	875.8	875.8
20°	857.1	860.3	863.5	865.2	865.2	865.2	865.2	865.2
22.5°	844.3	847.6	850.8	852.7	853.1	853.6	854.1	854.6
25°	824.5	828.0	831.6	833.8	834.6	835.5	836.4	837.3
27.5°	802.5	807.0	811.4	814.0	814.7	815.3	816.0	816.6
30°	787.0	791.7	796.5	799.3	800.1	801.0	801.9	802.8
32.5°	770.4	775.8	781.2	784.8	786.3	787.9	789.5	791.1
35°	746.8	753.3	759.8	764.0	766.1	768.2	770.2	772.3
37.5°	722.4	729.6	736.8	741.5	743.7	745.9	748.1	750.3
40°	705.3	713.0	720.7	725.8	728.5	731.1	733.8	736.5
42.5°	688.7	697.1	705.5	711.0	713.6	716.3	718.9	721.6
45°	663.2	672.3	681.5	687.5	690.5	693.4	696.4	699.3
47.5°	636.7	646.2	655.8	662.2	665.4	668.7	671.9	675.2
50°	618.5	628.5	638.6	645.2	648.4	651.7	654.9	658.2
52.5°	598.8	609.1	619.3	626.2	629.7	633.2	636.6	640.1
55°	569.3	579.9	590.5	597.7	601.5	605.4	609.2	613.0
57.5°	538.0	549.4	560.9	568.6	572.4	576.3	580.2	584.1
60°	517.4	528.6	539.8	547.4	551.6	555.7	559.8	564.0
62.5°	495.4	507.3	519.2	527.2	531.0	534.9	538.8	542.7
65°	462.1	474.2	486.3	494.2	498.0	501.9	505.7	509.5
67.5°	428.3	440.5	452.8	460.9	464.9	468.9	472.9	476.9
70°	404.9	417.5	430.2	438.3	441.9	445.4	449.0	452.5
72.5°	382.1	394.5	407.0	415.3	419.6	423.8	428.1	432.3
75°	347.8	360.5	373.2	381.4	385.3	389.1	392.9	396.8
77.5°	314.3	326.9	339.5	347.9	352.0	356.1	360.3	364.4
80°	291.5	303.9	316.3	324.5	328.6	332.8	336.9	341.0
82.5°	270.3	282.6	295.0	303.2	307.1	310.9	314.8	318.7
85°	239.7	252.1	264.5	272.8	276.9	281.0	285.1	289.3
87.5°	221.5	233.1	245.6	253.7	257.5	261.3	265.0	268.8
90°	235.9	245.4	259.5	268.3	271.9	275.4	279.0	282.5
92.5°	290.0	287.2	289.0	289.3	291.9	291.8	296.2	297.9
95°	479.4	419.7	382.1	363.9	352.4	346.6	346.7	351.4
97.5°	873.3	755.0	640.2	563.5	511.5	486.4	472.9	466.6
100°	1215.1	1082.0	933.7	800.3	707.1	660.4	629.9	612.3
102.5°	1436.8	1414.9	1309.2	1167.2	1065.7	983.7	944.8	919.7
105°	1546.2	1687.8	1713.2	1681.6	1612.9	1544.1	1497.4	1484.4
107.5°	1447.1	1654.7	1785.5	1848.3	1860.6	1859.9	1853.1	1834.8
110°	1364.5	1581.9	1740.0	1841.6	1894.8	1920.1	1933.8	1935.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1288.3	1497.3	1665.7	1781.2	1853.9	1894.1	1917.1	1926.6
115°	1192.8	1380.5	1541.5	1667.2	1753.0	1809.6	1843.1	1856.8
117.5°	1118.0	1283.8	1430.5	1548.6	1635.7	1695.2	1730.0	1741.8
120°	1079.1	1231.4	1362.8	1474.2	1558.8	1616.6	1653.6	1668.4
122.5°	1047.1	1187.1	1311.8	1412.7	1488.4	1544.8	1577.6	1590.1
125°	999.7	1127.3	1237.5	1329.9	1399.9	1446.7	1478.4	1490.4
127.5°	952.8	1068.4	1172.1	1257.5	1318.8	1362.8	1390.5	1400.5
130°	922.7	1029.7	1128.6	1210.0	1269.2	1311.1	1336.7	1348.3
132.5°	893.6	992.9	1084.1	1160.7	1219.1	1260.9	1284.6	1295.4
135°	852.9	935.8	1018.7	1088.0	1140.3	1181.0	1204.3	1211.3
137.5°	818.8	888.4	954.7	1015.1	1062.6	1097.6	1118.0	1127.0
140°	797.4	857.9	916.0	970.4	1009.3	1041.3	1060.5	1069.2
142.5°	780.4	831.5	881.3	926.7	963.6	992.5	1009.6	1012.5
145°	757.5	797.6	835.3	870.7	900.0	921.2	934.3	939.3
147.5°	740.2	770.7	799.0	824.1	847.8	864.3	872.9	875.7
150°	729.5	755.1	779.5	800.4	817.8	831.8	838.7	839.9
152.5°	719.3	743.0	763.7	781.8	795.5	807.6	812.7	812.9
155°	705.1	723.7	741.1	753.9	766.7	774.8	779.5	777.2
157.5°	688.6	704.2	718.8	728.8	737.9	744.6	746.7	746.7
160°	678.4	691.2	704.0	712.1	720.2	726.0	727.2	727.2
162.5°	668.2	679.1	690.0	696.3	704.4	708.4	709.5	708.6
165°	652.9	661.0	669.1	673.8	678.4	683.1	683.1	681.9
167.5°	638.2	644.5	650.1	654.3	656.3	658.9	658.7	657.3
170°	630.8	634.3	638.9	641.2	642.4	645.9	644.7	642.4
172.5°	622.4	625.0	628.7	630.1	631.3	632.9	631.7	630.3
175°	613.4	614.5	615.7	616.8	616.8	618.0	616.8	614.5
177.5°	606.9	606.9	607.8	607.8	607.8	607.8	606.9	605.0
180°	604.1	604.1	604.1	604.1	604.1	604.1	604.1	604.1

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