

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: P331662-840

Luminaire Tested: **S122RDIP-S485D725U840-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331662-840  
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: S122RDIP-S485D725U840-4F0-1E-UDD-F4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 725 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4574.3 lumens  
Efficiency: N/A  
Efficacy: 119.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

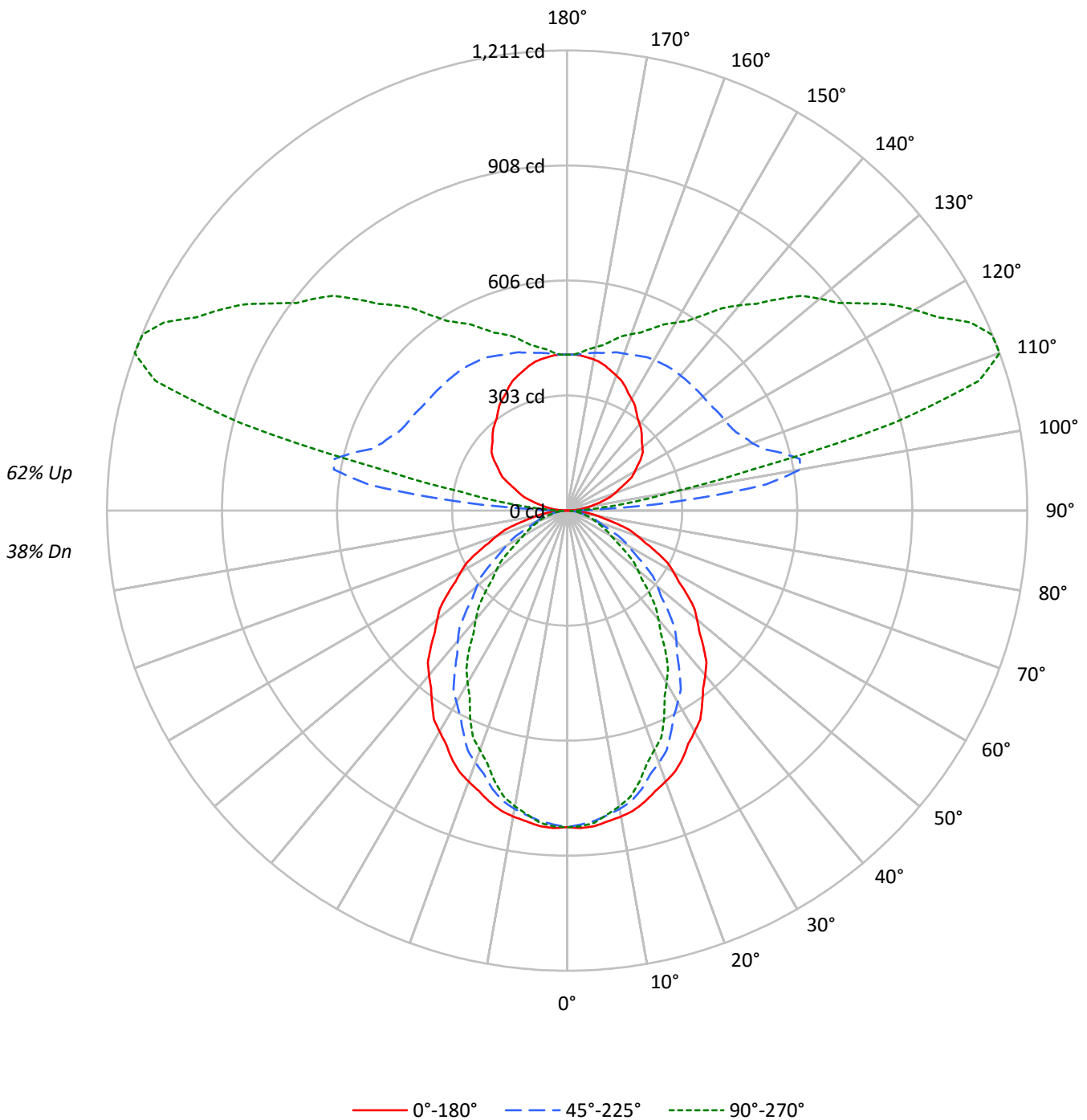
Input Watts (W): 38.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	104	104	104	104	94	94	94	94	76	76	76	60	60	60	45	45	45	38				
1	95	91	88	84	86	83	80	77	67	65	63	53	52	50	40	39	38	32				
2	87	80	74	69	79	73	68	64	59	56	53	47	45	43	36	34	33	28				
3	80	71	64	58	72	64	58	54	53	48	45	42	39	36	32	30	28	24				
4	73	63	55	49	66	57	51	46	47	42	39	38	34	32	29	27	25	21				
5	67	56	48	42	61	51	44	39	42	37	33	34	30	28	26	24	22	18				
6	62	50	42	37	56	46	39	34	38	33	29	31	27	24	24	21	19	16				
7	57	45	38	32	52	42	35	30	35	30	26	28	24	22	22	19	17	15				
8	53	41	34	29	48	38	31	27	32	27	23	26	22	19	20	17	16	13				
9	49	38	30	26	45	35	28	24	29	24	21	24	20	17	19	16	14	12				
10	46	35	28	23	42	32	26	21	27	22	19	22	18	16	17	15	13	11				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	13454	13454	13454
5°	13506	13287	13361
10°	13404	13070	12959
15°	13249	12682	12318
20°	13036	12129	11519
25°	12818	11501	10750
30°	12515	10856	9758
35°	12220	10153	8889
40°	11921	9428	7885
45°	11574	8611	6976
50°	11215	7784	6081
55°	10849	6899	5222
60°	10424	5968	4334
65°	9941	5012	3947
70°	9361	4131	3635
75°	8659	3762	3387
80°	7643	3366	3087
85°	6002	2649	2649



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.0	1.7
10°-20°	214.2	4.7
20°-30°	300.8	6.6
30°-40°	328.0	7.2
40°-50°	301.6	6.6
50°-60°	236.8	5.2
60°-70°	154.4	3.4
70°-80°	79.6	1.7
80°-90°	24.3	0.5
90°-100°	164.1	3.6
100°-110°	557.0	12.2
110°-120°	591.7	12.9
120°-130°	487.1	10.6
130°-140°	391.2	8.6
140°-150°	295.6	6.5
150°-160°	207.7	4.5
160°-170°	122.3	2.7
170°-180°	39.8	0.9
0°-30°	593.0	13.0
0°-40°	921.0	20.1
0°-60°	1459.4	31.9
0°-90°	1717.8	37.6
90°-120°	1312.8	28.7
90°-150°	2486.7	54.4
90°-180°	2856.0	62.4
0°-180°	4574.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	833	833	833	833	833	
5°	833	829	820	826	824	79
15°	793	783	759	745	737	223
25°	720	694	646	616	603	331
35°	620	580	515	469	451	388
45°	507	455	377	326	306	391
55°	385	325	245	202	186	344
65°	260	199	131	107	103	258
75°	139	87	60	55	54	147
85°	32	17	14	14	14	38
90°	1	11	27	26	26	3
95°	28	68	309	117	90	29
105°	96	145	585	1046	890	102
115°	170	214	490	1010	1171	168
125°	237	280	470	818	950	210
135°	278	332	465	688	787	215
145°	317	365	463	574	628	199
155°	361	390	449	508	528	166
165°	393	405	430	456	463	111
175°	410	410	414	419	418	39
180°	410	410	410	410	410	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3
2.5°	836.4	835.8	835.1	834.4	833.7	832.6	831.2	829.7	828.2	826.8	828.1
5°	833.3	832.5	831.7	830.9	830.0	828.5	826.4	824.2	822.0	819.8	821.3
7.5°	824.8	823.7	822.7	821.6	820.6	818.8	816.3	813.7	811.2	808.7	809.1
10°	817.6	816.4	815.2	814.1	812.8	810.6	807.3	803.9	800.5	797.2	796.7
12.5°	808.5	807.1	805.6	804.2	802.7	799.9	795.6	791.3	787.0	782.7	781.8
15°	792.6	790.8	789.0	787.1	785.3	781.5	775.8	770.1	764.5	758.7	755.6
17.5°	773.3	770.4	767.6	764.8	761.9	756.9	749.6	742.3	735.0	727.6	723.9
20°	758.7	755.4	752.0	748.7	745.3	739.4	731.0	722.7	714.3	705.9	701.8
22.5°	743.1	739.3	735.5	731.7	728.0	721.4	712.0	702.5	693.1	683.6	678.2
25°	719.5	714.2	708.8	703.4	698.0	689.8	678.7	667.7	656.6	645.6	638.7
27.5°	691.2	685.3	679.4	673.7	667.8	658.6	646.2	633.7	621.3	608.7	600.8
30°	671.3	664.9	658.5	652.2	645.8	635.9	622.5	609.0	595.6	582.3	573.7
32.5°	652.0	644.5	637.0	629.7	622.2	611.6	597.9	584.2	570.6	556.9	547.1
35°	620.0	611.4	602.9	594.3	585.7	574.1	559.4	544.6	529.9	515.1	504.5
37.5°	587.9	578.6	569.2	559.8	550.5	537.9	522.2	506.4	490.7	475.0	463.3
40°	565.6	555.6	545.5	535.5	525.4	512.3	496.0	479.8	463.5	447.3	435.4
42.5°	542.7	532.1	521.5	511.0	500.4	486.7	469.9	453.0	436.3	419.5	407.2
45°	506.9	495.6	484.3	473.1	461.9	447.5	429.9	412.3	394.7	377.1	365.2
47.5°	471.8	459.9	448.1	436.2	424.2	409.2	391.0	372.8	354.7	336.5	324.7
50°	446.5	434.5	422.7	410.8	398.9	383.7	365.3	346.9	328.4	309.9	298.4
52.5°	421.7	409.3	396.9	384.5	372.0	356.8	338.7	320.7	302.7	284.7	273.5
55°	385.4	372.3	359.2	346.2	333.2	317.5	299.4	281.3	263.2	245.1	235.1
57.5°	348.1	334.8	321.3	307.9	294.5	279.1	261.8	244.3	226.9	209.5	200.3
60°	322.8	309.4	296.0	282.6	269.1	253.9	236.6	219.3	202.1	184.8	176.2
62.5°	298.0	284.7	271.2	257.8	244.4	229.5	213.1	196.6	180.2	163.7	155.5
65°	260.2	246.6	233.1	219.4	205.9	191.6	176.5	161.4	146.3	131.2	125.5
67.5°	223.7	210.3	196.7	183.3	169.8	156.2	142.7	129.2	115.5	102.0	99.4
70°	198.3	185.3	172.2	159.2	146.0	133.7	122.2	110.6	99.1	87.5	85.8
72.5°	174.2	161.7	149.2	136.6	124.1	113.2	103.9	94.6	85.3	76.0	74.6
75°	138.8	127.0	115.3	103.6	91.8	83.1	77.5	71.7	66.0	60.3	59.2
77.5°	103.9	93.6	83.3	73.0	62.8	56.2	53.5	50.8	48.0	45.2	44.5
80°	82.2	73.6	65.1	56.6	48.0	42.9	41.2	39.6	37.9	36.2	35.5
82.5°	62.3	55.6	49.0	42.3	35.6	31.7	30.6	29.4	28.3	27.2	26.8
85°	32.4	28.9	25.3	21.9	18.4	16.4	15.9	15.3	14.8	14.3	14.3
87.5°	9.8	9.2	8.8	8.0	7.3	7.2	8.0	9.1	10.0	10.2	9.9
90°	0.8	3.1	6.4	7.9	9.5	11.8	15.8	21.3	26.1	26.9	26.1
92.5°	9.6	13.9	19.6	23.0	28.4	35.9	53.7	78.8	101.2	102.6	86.6
95°	27.7	30.8	38.7	45.7	58.4	77.4	113.7	182.4	274.0	309.4	270.7
97.5°	45.0	49.3	57.7	68.4	82.9	104.3	150.0	245.7	397.9	528.3	554.2
100°	60.8	63.1	70.3	82.9	98.7	120.8	162.6	258.9	429.4	623.6	737.3
102.5°	75.3	77.1	84.1	96.7	113.2	135.3	174.0	259.5	417.5	626.8	805.5
105°	96.3	99.5	105.0	116.8	134.2	156.3	193.4	263.7	393.9	584.9	795.0
107.5°	119.1	121.6	126.9	137.8	155.0	177.3	213.3	274.6	382.2	540.1	725.6
110°	134.2	137.3	142.1	152.4	169.0	191.9	226.5	283.4	379.7	518.7	682.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	148.0	151.3	156.6	166.2	182.2	205.7	239.2	292.9	380.3	504.7	651.8
115°	169.8	173.7	178.4	187.8	203.7	225.0	258.9	307.1	383.6	489.5	614.2
117.5°	192.2	195.3	200.1	208.4	223.6	245.7	277.1	322.2	389.3	482.0	590.5
120°	206.0	209.2	213.9	221.1	236.8	258.9	289.7	332.3	393.1	477.6	577.8
122.5°	219.3	221.9	226.5	234.3	250.0	272.9	301.7	341.2	397.6	475.0	567.1
125°	236.8	239.2	243.9	253.4	269.2	291.2	319.7	355.3	404.1	470.5	551.8
127.5°	250.7	253.9	260.5	270.9	286.1	308.8	336.5	368.3	411.0	467.8	537.6
130°	258.9	262.1	269.9	281.0	296.8	318.9	346.6	376.6	416.1	466.6	528.2
132.5°	266.5	270.3	278.8	290.5	306.9	329.0	355.4	384.8	421.1	466.0	520.6
135°	277.9	281.0	290.5	302.4	320.5	342.6	367.9	395.5	427.1	464.9	510.0
137.5°	288.6	292.4	301.8	314.5	332.5	353.0	378.0	403.7	432.4	464.8	502.5
140°	296.8	299.9	309.4	322.0	339.4	360.0	383.6	408.1	434.9	464.1	498.2
142.5°	305.0	307.6	316.4	329.0	345.8	365.1	388.1	411.9	436.9	464.1	493.7
145°	317.3	320.5	328.4	340.2	356.0	373.3	394.8	416.8	438.9	462.6	487.9
147.5°	330.6	333.0	340.5	351.4	364.6	380.0	400.1	419.5	439.6	459.8	481.9
150°	339.4	341.8	348.1	358.4	370.2	384.5	402.6	420.7	438.9	457.9	476.8
152.5°	348.3	349.4	355.7	364.7	375.9	388.9	405.2	421.4	437.7	454.7	472.4
155°	360.7	361.5	366.3	375.0	383.6	395.5	408.9	422.3	435.8	449.2	464.1
157.5°	371.2	371.9	375.8	383.3	390.3	400.2	411.6	422.3	432.1	443.5	456.5
160°	378.1	378.9	382.0	388.4	394.8	403.3	412.8	422.3	430.2	439.7	450.8
162.5°	385.1	384.6	387.8	392.8	398.5	405.3	413.5	421.7	428.4	436.6	445.7
165°	393.1	392.3	393.9	398.7	402.6	407.4	414.4	420.0	424.7	430.2	437.4
167.5°	399.8	398.8	400.2	403.2	406.1	409.1	414.2	418.9	421.1	424.7	429.1
170°	404.1	402.6	403.3	405.8	407.4	409.7	413.6	417.6	419.2	421.5	424.7
172.5°	406.7	405.8	405.3	407.7	408.6	410.3	413.0	415.7	416.7	417.8	420.3
175°	409.7	408.9	408.1	409.7	409.7	410.5	412.0	413.6	412.8	413.6	414.4
177.5°	411.1	409.9	409.2	410.5	410.5	410.5	411.1	412.4	411.1	410.5	411.1
180°	410.5	410.5	410.5	410.5	410.5	410.5	410.5	410.5	410.5	410.5	410.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3
2.5°	829.4	830.8	832.1	832.6	832.4	832.1	831.8	831.6
5°	822.8	824.4	825.9	826.4	825.9	825.4	824.9	824.4
7.5°	809.5	809.9	810.4	810.2	809.3	808.4	807.6	806.7
10°	796.2	795.7	795.2	794.5	793.5	792.4	791.4	790.4
12.5°	780.9	780.0	779.1	777.8	776.1	774.5	772.7	771.1
15°	752.3	749.2	746.0	743.6	741.8	740.2	738.5	736.9
17.5°	720.0	716.3	712.5	709.1	706.3	703.4	700.5	697.6
20°	697.5	693.4	689.1	685.2	681.6	677.8	674.2	670.4
22.5°	672.8	667.4	662.1	657.9	655.2	652.5	649.7	646.9
25°	631.9	625.0	618.1	613.4	610.9	608.3	605.9	603.4
27.5°	592.8	584.7	576.7	570.8	566.7	562.8	558.8	554.8
30°	565.1	556.6	548.1	541.5	536.9	532.5	528.0	523.4
32.5°	537.3	527.7	517.9	510.9	506.6	502.4	498.1	493.8
35°	494.0	483.4	472.9	465.7	462.1	458.4	454.7	451.0
37.5°	451.7	440.1	428.5	420.5	416.4	412.1	407.9	403.6
40°	423.4	411.5	399.6	391.5	387.2	382.8	378.4	374.1
42.5°	394.9	382.5	370.3	362.0	357.8	353.6	349.3	345.1
45°	353.3	341.4	329.5	321.5	317.5	313.5	309.4	305.5
47.5°	312.9	301.0	289.2	281.4	277.8	274.2	270.4	266.8
50°	286.8	275.3	263.7	256.2	252.7	249.1	245.6	242.1
52.5°	262.3	251.2	239.9	232.8	229.5	226.3	223.0	219.7
55°	225.0	214.9	204.9	198.2	195.1	191.9	188.7	185.5
57.5°	191.1	181.9	172.7	166.7	164.0	161.4	158.6	155.9
60°	167.6	159.2	150.6	145.0	142.3	139.6	136.9	134.2
62.5°	147.3	139.3	131.1	126.2	124.6	123.0	121.4	119.8
65°	119.9	114.1	108.5	105.3	104.8	104.3	103.8	103.3
67.5°	96.7	94.1	91.5	90.0	89.4	88.9	88.4	87.8
70°	84.1	82.5	80.8	79.6	79.0	78.3	77.6	77.0
72.5°	73.2	71.8	70.4	69.5	69.1	68.7	68.3	67.9
75°	58.0	56.9	55.6	54.9	54.8	54.6	54.4	54.3
77.5°	43.9	43.2	42.6	42.1	41.8	41.6	41.3	41.0
80°	34.8	34.2	33.5	33.2	33.2	33.2	33.2	33.2
82.5°	26.4	26.0	25.5	25.3	25.3	25.3	25.3	25.3
85°	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
87.5°	9.6	9.2	9.4	9.4	9.4	9.4	9.4	9.4
90°	25.2	23.7	25.2	26.1	26.1	26.1	26.1	26.1
92.5°	68.9	59.1	52.4	47.6	46.9	44.3	45.0	43.7
95°	206.8	158.6	125.5	108.2	97.9	91.6	89.2	90.0
97.5°	482.6	394.9	309.4	252.5	214.7	195.3	183.8	177.1
100°	720.7	622.9	514.7	419.2	353.7	319.7	296.8	282.6
102.5°	876.8	854.6	775.5	674.3	603.1	545.1	516.5	497.4
105°	959.2	1048.3	1058.6	1032.6	983.6	934.6	900.7	889.7
107.5°	899.8	1034.1	1116.2	1154.5	1160.6	1157.9	1151.1	1136.4
110°	848.6	990.0	1091.0	1155.7	1189.6	1204.7	1211.7	1210.9





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	801.9	937.5	1045.5	1119.7	1166.9	1192.0	1205.5	1209.7
115°	744.4	866.0	969.4	1050.7	1106.7	1143.1	1163.6	1170.7
117.5°	701.1	807.9	901.7	978.0	1035.1	1073.5	1095.1	1101.1
120°	679.6	777.6	861.2	933.1	988.4	1025.4	1048.3	1056.2
122.5°	662.7	752.3	831.5	896.5	946.0	982.5	1002.9	1009.5
125°	637.8	719.1	788.6	847.8	893.6	923.6	943.3	949.7
127.5°	613.4	686.9	752.5	807.1	847.1	875.1	892.2	897.3
130°	597.5	665.5	727.8	779.9	818.6	845.5	861.2	867.6
132.5°	582.4	645.3	702.6	751.5	789.6	816.4	830.9	836.6
135°	561.3	613.4	665.5	709.6	743.7	769.7	783.9	787.1
137.5°	544.4	587.9	629.3	667.8	698.8	721.2	733.7	738.4
140°	533.6	571.6	607.8	642.6	667.8	688.3	700.2	705.0
142.5°	524.8	557.0	588.2	617.3	641.4	659.9	670.6	671.5
145°	512.3	538.4	562.9	585.7	604.7	618.1	626.0	628.3
147.5°	502.7	523.2	542.3	559.1	574.7	585.4	590.8	592.2
150°	495.7	513.1	529.7	543.9	555.7	565.2	570.0	570.8
152.5°	488.8	504.9	519.0	531.3	540.6	548.8	552.3	552.4
155°	479.2	491.8	503.6	512.3	521.0	526.5	529.7	528.2
157.5°	468.0	478.6	488.5	495.2	501.4	506.0	507.5	507.5
160°	461.0	469.7	478.4	483.9	489.5	493.4	494.1	494.1
162.5°	454.0	461.5	468.9	473.2	478.7	481.4	482.2	481.5
165°	443.6	449.2	454.7	457.9	461.0	464.1	464.1	463.4
167.5°	433.7	438.0	441.7	444.6	446.1	447.8	447.6	446.7
170°	428.7	431.0	434.1	435.8	436.6	438.9	438.1	436.6
172.5°	422.9	424.7	427.3	428.2	429.0	430.1	429.3	428.4
175°	416.8	417.6	418.4	419.2	419.2	420.0	419.2	417.6
177.5°	412.4	412.4	413.0	413.0	413.0	413.0	412.4	411.1
180°	410.5	410.5	410.5	410.5	410.5	410.5	410.5	410.5

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