

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: P332558-840

Luminaire Tested: **S124DIP-S575D810U840-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332558-840  
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-S575D810U840-4F0-1E-UDD-D4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 810 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5317.5 lumens  
Efficiency: N/A  
Efficacy: 138.5 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

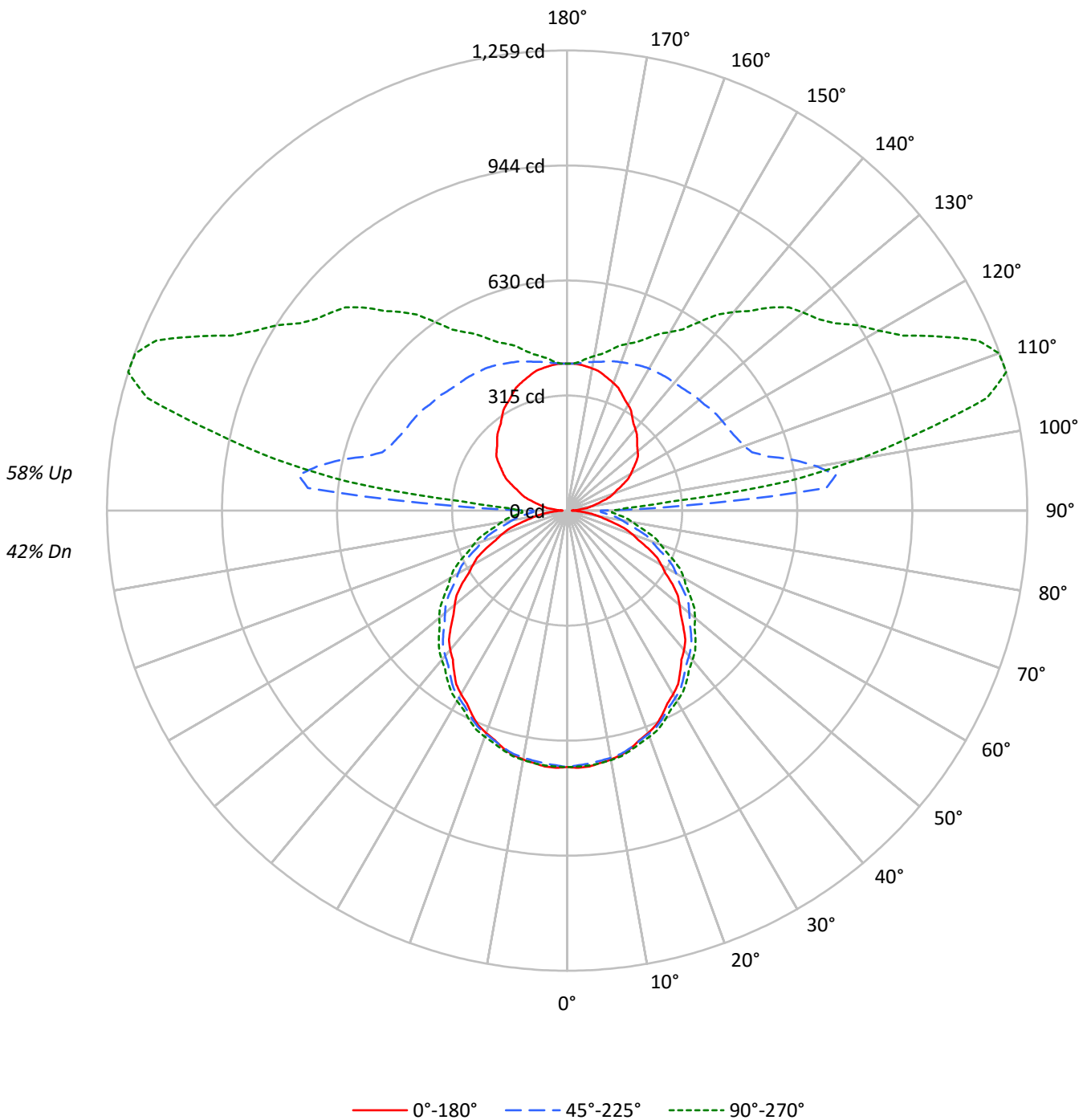
Input Watts (W): 38.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	105	105	105	105	96	96	96	96	79	79	79	63	63	63	48	48	48	42
1	95	90	86	83	86	82	79	76	68	65	63	54	52	51	41	40	39	33
2	86	78	72	67	78	72	66	61	59	55	51	47	44	42	36	34	32	27
3	78	69	61	55	71	63	56	51	52	47	43	41	38	35	32	29	27	23
4	72	60	52	46	65	55	48	43	46	40	36	36	33	29	28	25	23	19
5	66	54	45	39	59	49	42	36	41	35	31	33	29	25	25	22	20	16
6	60	48	40	34	55	44	37	31	36	31	27	29	25	22	23	20	17	14
7	56	43	35	30	50	40	33	27	33	27	23	27	22	19	21	18	15	13
8	52	39	31	26	47	36	29	24	30	24	21	24	20	17	19	16	14	11
9	48	36	28	23	44	33	26	21	27	22	18	22	18	15	17	14	12	10
10	45	33	25	21	41	30	24	19	25	20	16	21	17	14	16	13	11	9

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

	0°	45°	90°
0°	5666	5666	5666
5°	5683	5537	5552
10°	5649	5446	5442
15°	5598	5341	5312
20°	5521	5226	5185
25°	5435	5096	5047
30°	5342	4967	4904
35°	5237	4834	4779
40°	5153	4710	4648
45°	5027	4594	4537
50°	4920	4460	4418
55°	4811	4333	4278
60°	4641	4173	4153
65°	4454	4001	3997
70°	4226	3805	3816
75°	3910	3587	3652
80°	3559	3381	3492
85°	3112	3195	3398



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.5	1.2
10°-20°	190.4	3.6
20°-30°	287.9	5.4
30°-40°	348.3	6.6
40°-50°	368.3	6.9
50°-60°	346.6	6.5
60°-70°	287.5	5.4
70°-80°	202.0	3.8
80°-90°	116.4	2.2
90°-100°	358.1	6.7
100°-110°	654.4	12.3
110°-120°	574.9	10.8
120°-130°	474.2	8.9
130°-140°	387.8	7.3
140°-150°	291.6	5.5
150°-160°	203.8	3.8
160°-170°	119.9	2.3
170°-180°	39.0	0.7
0°-30°	544.7	10.2
0°-40°	893.1	16.8
0°-60°	1607.9	30.2
0°-90°	2213.8	41.6
90°-120°	1587.3	29.9
90°-150°	2741.0	51.5
90°-180°	3104.0	58.4
0°-180°	5317.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	702	702	702	702	702	
5°	703	700	695	700	700	67
15°	674	674	672	678	678	190
25°	616	621	623	631	633	284
35°	539	548	556	567	570	337
45°	450	464	479	492	497	347
55°	352	369	392	407	412	314
65°	244	269	296	314	321	241
75°	135	164	197	218	226	144
85°	42	75	110	133	142	44
90°	13	50	92	115	123	10
95°	36	119	712	407	289	37
105°	100	157	570	1186	1189	107
115°	167	217	499	941	1126	166
125°	230	273	482	792	893	205
135°	271	322	463	690	786	210
145°	311	355	453	570	629	195
155°	353	381	441	499	520	163
165°	385	396	422	447	454	109
175°	401	402	405	411	409	38
180°	402	402	402	402	402	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8
2.5°	704.3	703.9	703.5	703.0	702.6	701.9	700.7	699.6	698.4	697.3	698.3
5°	702.6	702.1	701.5	700.9	700.4	699.5	698.3	697.1	695.9	694.7	696.1
7.5°	696.6	696.2	695.9	695.6	695.3	694.7	693.7	692.7	691.6	690.5	692.2
10°	691.6	691.4	691.2	691.1	690.8	690.3	689.4	688.5	687.7	686.8	688.4
12.5°	684.6	684.6	684.6	684.5	684.5	684.2	683.6	683.0	682.4	681.8	683.2
15°	673.5	673.7	673.8	674.0	674.2	674.0	673.5	673.0	672.4	671.9	673.5
17.5°	658.2	658.7	659.2	659.7	660.4	660.6	660.5	660.4	660.2	660.1	661.7
20°	647.5	648.0	648.5	649.1	649.6	649.9	650.2	650.4	650.5	650.7	652.4
22.5°	635.6	636.2	636.9	637.5	638.2	638.7	639.0	639.3	639.6	640.0	641.8
25°	616.1	617.1	618.2	619.2	620.3	621.1	621.6	622.1	622.7	623.2	625.1
27.5°	594.4	595.9	597.4	599.1	600.6	601.7	602.5	603.3	604.1	604.9	606.7
30°	580.0	581.4	582.7	584.1	585.5	586.8	588.0	589.3	590.5	591.8	593.7
32.5°	564.2	565.9	567.5	569.3	571.0	572.5	573.8	575.2	576.5	577.9	580.1
35°	539.1	541.2	543.3	545.3	547.4	549.4	551.1	552.9	554.6	556.3	558.9
37.5°	513.8	516.1	518.6	521.0	523.4	525.7	527.9	530.1	532.2	534.3	536.8
40°	497.5	499.7	502.0	504.2	506.5	508.9	511.3	513.7	516.2	518.7	521.3
42.5°	478.6	481.1	483.6	486.3	488.8	491.5	494.3	497.2	500.1	502.9	505.8
45°	449.5	452.8	456.2	459.5	462.7	466.1	469.4	472.7	476.1	479.4	482.3
47.5°	421.7	425.1	428.5	431.9	435.4	439.0	442.8	446.7	450.5	454.3	457.5
50°	401.5	405.4	409.2	413.1	417.0	420.8	424.6	428.5	432.3	436.2	439.6
52.5°	381.4	385.3	389.1	392.9	396.8	400.9	405.4	409.7	414.1	418.5	422.0
55°	352.0	355.7	359.4	363.0	366.7	371.1	376.4	381.6	386.9	392.1	395.7
57.5°	319.2	323.8	328.3	332.9	337.4	342.2	347.4	352.6	357.9	363.0	367.2
60°	297.8	302.4	306.9	311.4	316.0	321.1	326.9	332.6	338.4	344.2	348.2
62.5°	277.1	282.1	287.0	292.0	296.9	302.3	308.0	313.8	319.6	325.4	329.3
65°	243.6	249.2	254.8	260.3	266.0	271.8	277.6	283.6	289.5	295.5	299.8
67.5°	211.4	217.3	223.3	229.2	235.1	241.3	247.6	254.0	260.3	266.7	271.1
70°	189.3	195.3	201.3	207.2	213.2	219.4	226.0	232.7	239.3	246.0	250.6
72.5°	168.0	174.1	180.2	186.2	192.3	198.8	205.9	213.0	220.0	227.1	231.7
75°	135.1	141.6	148.0	154.5	161.0	167.9	175.2	182.6	190.0	197.2	202.2
77.5°	104.5	111.4	118.3	125.0	131.9	139.2	146.8	154.5	162.2	169.9	174.8
80°	85.6	92.6	99.7	106.6	113.6	120.9	128.7	136.3	144.0	151.7	156.9
82.5°	66.8	74.0	81.3	88.6	95.8	103.3	111.0	118.7	126.3	134.1	139.5
85°	41.6	49.0	56.4	63.6	71.0	78.6	86.4	94.3	102.2	110.0	115.2
87.5°	23.4	30.9	38.5	45.7	53.0	60.4	69.0	76.6	84.6	92.6	97.5
90°	13.3	21.9	31.3	39.1	46.9	54.1	66.3	73.8	82.9	92.0	96.2
92.5°	20.9	31.3	45.0	61.0	78.8	102.1	149.8	218.5	285.7	324.5	287.6
95°	36.3	44.4	58.1	74.1	98.8	138.5	214.3	350.9	546.8	712.0	734.8
97.5°	56.0	61.0	72.7	87.2	108.4	142.2	202.2	316.2	510.9	741.3	899.4
100°	68.7	73.2	83.3	97.3	116.8	147.7	201.2	297.2	465.1	694.6	901.4
102.5°	81.3	86.5	95.4	108.3	126.6	155.9	204.8	289.9	433.6	637.7	850.8
105°	99.5	105.3	112.8	125.7	143.4	171.3	215.7	287.7	404.7	569.9	759.8
107.5°	121.1	125.5	132.4	145.3	161.8	188.8	229.7	295.5	396.1	530.0	685.7
110°	135.0	139.1	145.4	157.3	174.0	199.5	240.4	301.8	394.8	515.4	648.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	148.2	152.0	158.8	169.8	186.1	211.5	250.7	308.7	395.8	506.5	625.3
115°	167.3	171.3	178.4	187.9	204.5	229.3	266.5	319.5	398.5	498.9	602.2
117.5°	188.0	191.3	197.0	206.7	221.7	246.9	282.1	330.8	401.9	493.3	589.1
120°	201.4	203.5	209.4	218.7	232.7	257.5	292.7	338.7	404.7	490.2	581.4
122.5°	214.0	215.6	221.3	229.4	244.3	268.1	303.0	346.3	407.5	486.5	573.2
125°	229.7	232.8	237.3	245.8	260.6	284.9	317.7	358.3	412.4	481.6	560.7
127.5°	244.3	246.6	252.2	262.0	277.4	301.2	332.0	368.8	415.6	475.1	544.6
130°	251.9	254.9	261.1	272.7	287.5	311.7	341.3	375.0	418.0	471.3	534.5
132.5°	260.1	262.5	270.4	281.6	297.6	320.3	349.4	381.7	420.5	468.2	525.5
135°	270.8	274.0	281.9	295.3	311.9	333.1	360.3	390.0	423.5	462.7	511.3
137.5°	282.4	285.2	293.7	306.3	323.4	343.2	368.1	395.2	424.5	458.9	499.2
140°	290.5	292.8	301.2	314.6	330.9	349.9	373.8	399.2	426.3	456.4	492.6
142.5°	298.8	301.1	309.1	321.9	337.8	356.1	379.0	402.3	427.8	455.1	487.3
145°	311.1	313.3	321.0	331.9	346.8	364.1	384.6	405.9	428.8	453.2	479.6
147.5°	325.2	325.8	332.5	343.8	356.1	371.6	390.9	409.5	429.6	450.4	472.8
150°	334.0	334.7	340.7	350.1	361.7	376.7	394.0	411.4	429.6	448.5	468.3
152.5°	341.6	341.7	348.0	356.8	367.4	381.1	396.6	412.6	428.3	445.4	463.2
155°	352.9	353.8	358.5	366.4	375.1	386.9	400.3	413.7	426.4	440.6	455.7
157.5°	364.2	364.2	368.6	374.8	382.3	391.6	403.0	413.7	424.3	435.8	447.9
160°	371.1	371.1	374.3	379.8	386.2	394.9	404.2	413.7	422.4	431.9	442.2
162.5°	377.5	376.8	379.3	384.3	389.9	396.7	405.6	413.7	420.6	428.2	437.2
165°	384.6	384.6	386.2	390.1	394.0	398.8	405.9	412.2	417.0	422.4	428.8
167.5°	391.6	390.9	391.6	394.7	396.9	400.5	405.8	410.3	413.1	416.8	421.2
170°	394.9	394.0	394.9	397.2	398.8	401.1	405.1	409.0	410.6	412.9	416.2
172.5°	398.0	397.2	397.4	399.1	400.0	401.7	404.5	407.8	408.1	409.2	411.7
175°	401.1	400.3	400.3	401.1	401.9	401.9	403.5	405.9	405.1	405.1	406.7
177.5°	402.5	401.9	401.3	401.9	401.9	401.9	402.5	403.8	402.5	402.5	403.1
180°	401.9	401.9	401.9	401.9	401.9	401.9	401.9	401.9	401.9	401.9	401.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8
2.5°	699.3	700.2	701.3	701.7	701.6	701.4	701.3	701.1
5°	697.5	698.8	700.2	700.8	700.7	700.5	700.3	700.1
7.5°	693.8	695.3	696.9	697.6	697.4	697.2	697.0	696.9
10°	689.9	691.6	693.1	693.8	693.7	693.5	693.3	693.1
12.5°	684.7	686.1	687.5	688.2	688.2	688.1	688.1	688.1
15°	675.0	676.6	678.1	678.8	678.7	678.5	678.3	678.1
17.5°	663.3	664.9	666.5	667.2	667.1	667.0	666.8	666.7
20°	654.2	655.9	657.6	658.5	658.5	658.5	658.5	658.5
22.5°	643.5	645.2	646.9	648.0	648.2	648.5	648.8	649.1
25°	627.0	628.9	630.9	631.9	632.1	632.3	632.4	632.6
27.5°	608.5	610.3	612.1	613.1	613.3	613.5	613.7	613.9
30°	595.6	597.5	599.5	600.6	600.9	601.3	601.6	602.0
32.5°	582.3	584.5	586.7	587.9	588.3	588.7	589.1	589.4
35°	561.3	563.7	566.1	567.6	568.2	568.7	569.2	569.8
37.5°	539.4	541.8	544.3	545.8	546.3	546.9	547.4	548.1
40°	523.9	526.5	529.2	530.8	531.5	532.2	532.9	533.6
42.5°	508.8	511.6	514.5	516.2	516.8	517.4	518.0	518.5
45°	485.3	488.3	491.2	493.1	494.0	494.9	495.7	496.7
47.5°	460.5	463.6	466.7	468.7	469.8	470.8	471.9	472.9
50°	443.1	446.7	450.1	452.4	453.4	454.4	455.6	456.6
52.5°	425.6	429.0	432.5	434.7	435.9	436.9	437.9	439.0
55°	399.1	402.6	406.1	408.4	409.4	410.5	411.5	412.5
57.5°	371.3	375.6	379.7	382.2	383.2	384.2	385.2	386.2
60°	352.2	356.3	360.2	362.9	364.4	365.8	367.2	368.6
62.5°	333.4	337.4	341.4	344.1	345.5	346.9	348.3	349.7
65°	304.2	308.6	313.0	315.8	317.2	318.6	320.0	321.4
67.5°	275.6	280.0	284.5	287.3	288.7	290.0	291.4	292.8
70°	255.4	260.1	264.8	267.8	269.0	270.2	271.5	272.7
72.5°	236.2	240.9	245.4	248.3	249.7	251.1	252.5	253.8
75°	207.0	211.9	216.8	220.0	221.6	223.2	224.8	226.3
77.5°	179.9	184.8	189.8	193.1	194.7	196.4	198.0	199.8
80°	162.2	167.3	172.6	175.9	177.3	178.7	180.2	181.6
82.5°	144.8	150.2	155.6	159.1	160.6	162.1	163.6	165.2
85°	120.5	125.7	131.0	134.5	136.2	137.9	139.7	141.5
87.5°	102.7	108.0	113.2	116.4	118.2	119.9	121.2	122.8
90°	102.1	108.0	113.8	117.0	119.3	121.5	122.1	123.4
92.5°	238.9	205.5	186.6	174.0	166.0	163.2	161.9	163.3
95°	662.9	545.2	444.1	370.7	333.6	310.6	298.0	289.3
97.5°	937.2	896.3	823.5	744.2	689.0	643.0	620.8	605.8
100°	1021.5	1042.0	1007.9	952.5	885.0	838.1	815.7	810.5
102.5°	1013.6	1096.5	1112.3	1091.0	1050.2	1016.6	993.0	989.4
105°	945.0	1086.0	1168.5	1203.8	1206.7	1201.8	1192.1	1188.8
107.5°	850.1	999.9	1114.2	1187.4	1227.7	1247.0	1256.2	1259.4
110°	792.7	933.3	1051.9	1141.5	1198.9	1233.4	1249.1	1257.6





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	749.5	874.1	986.2	1075.7	1140.7	1182.2	1203.6	1216.5
115°	704.8	805.8	901.9	980.3	1043.9	1092.5	1119.0	1126.5
117.5°	680.0	764.1	840.3	907.2	961.7	1002.9	1030.0	1036.2
120°	667.7	744.7	811.3	869.9	916.3	952.4	974.3	984.4
122.5°	657.0	731.4	792.4	843.9	883.2	914.2	932.8	942.7
125°	639.9	711.0	768.8	814.5	847.1	871.0	887.1	892.9
127.5°	618.9	687.0	744.5	787.9	820.8	842.3	856.2	862.1
130°	603.2	668.7	725.6	769.5	802.9	823.7	837.4	843.1
132.5°	587.1	648.7	704.2	748.0	780.8	804.2	817.2	822.9
135°	563.8	617.9	668.9	710.3	743.0	766.1	779.8	785.6
137.5°	543.1	589.2	632.3	669.6	700.0	722.8	734.1	740.6
140°	531.2	570.6	608.4	643.2	671.7	689.9	701.9	709.0
142.5°	520.6	555.2	587.7	617.8	643.0	659.8	670.3	675.6
145°	505.8	533.8	558.6	581.5	602.0	616.0	624.7	629.3
147.5°	493.8	515.2	534.3	552.1	567.1	579.3	585.8	587.7
150°	487.2	505.3	521.2	535.3	548.1	558.3	563.0	563.8
152.5°	480.3	495.8	510.4	522.1	532.8	541.2	544.0	544.8
155°	469.8	482.5	494.3	503.8	511.7	518.0	520.4	520.4
157.5°	458.6	469.2	479.2	486.8	492.7	497.5	498.9	498.9
160°	451.7	460.4	469.1	475.3	480.1	484.8	485.6	485.6
162.5°	444.7	452.1	459.0	464.6	468.1	472.8	473.6	473.0
165°	435.0	439.8	445.4	449.3	452.4	455.7	454.8	454.0
167.5°	425.8	429.4	433.8	436.2	437.8	439.8	439.7	439.0
170°	420.1	422.4	425.7	428.0	429.6	430.3	429.6	429.6
172.5°	415.1	416.8	418.7	420.4	421.3	422.1	421.3	420.1
175°	408.3	409.0	410.6	410.6	410.6	412.2	410.6	409.0
177.5°	403.8	404.5	404.5	405.1	404.5	405.1	403.8	402.5
180°	401.9	401.9	401.9	401.9	401.9	401.9	401.9	401.9

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