

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: P331987-830

Luminaire Tested: **S123DIP-S775D1025U830-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331987-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D1025U830-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6544.8 lumens
Efficiency: N/A
Efficacy: 125.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

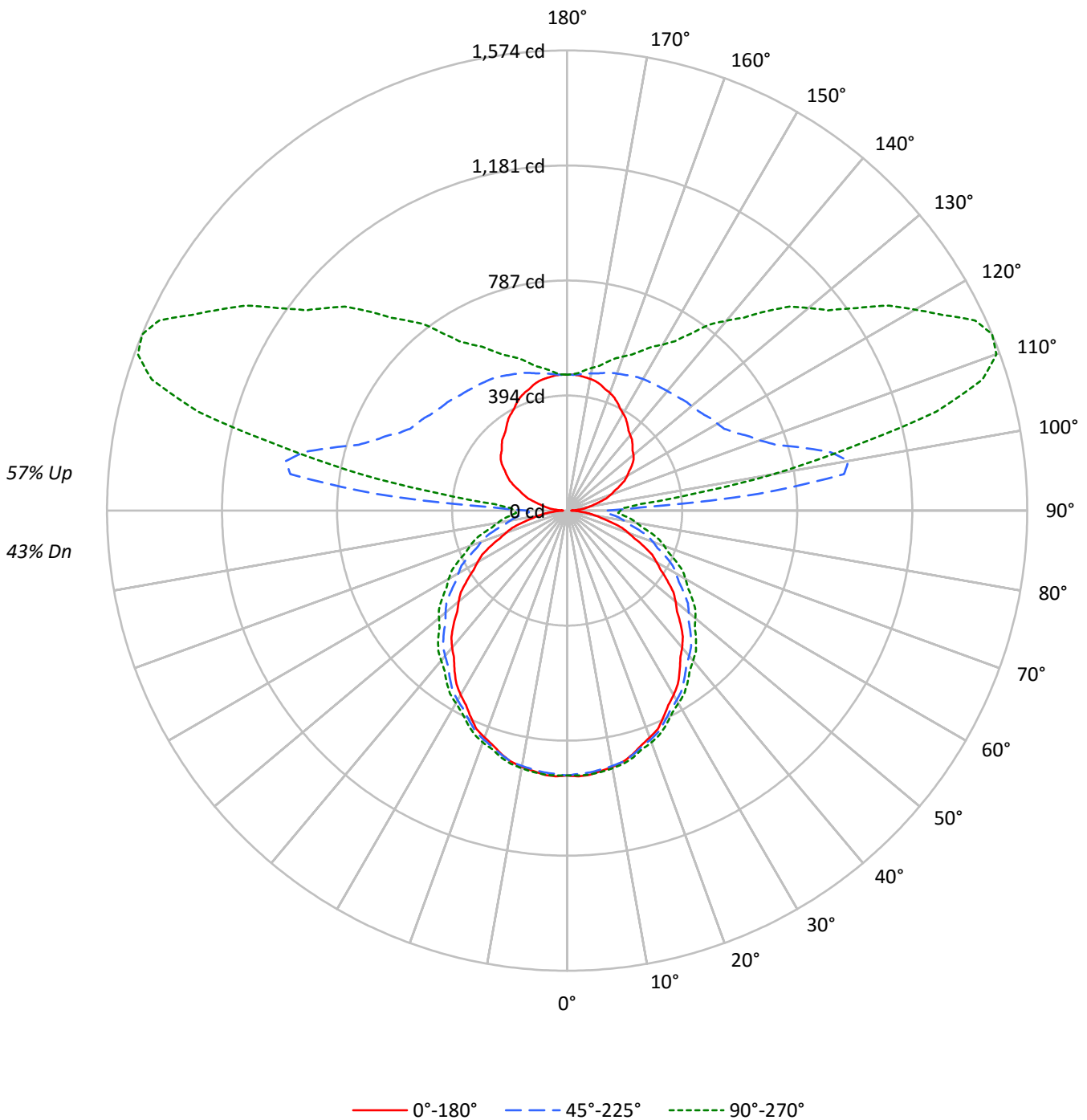
Input Watts (W): 52
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	79	79	79	64	64	64	49	49	49	43
1	95	91	86	83	87	83	79	76	68	65	63	55	53	51	42	41	40	34
2	86	79	72	67	78	72	66	62	59	55	52	47	45	42	37	35	33	28
3	79	69	61	55	71	63	56	51	52	47	43	42	38	35	32	30	28	23
4	72	61	52	46	65	55	48	43	46	41	36	37	33	30	29	26	24	20
5	66	54	46	39	60	49	42	37	41	35	31	33	29	26	26	23	20	17
6	60	48	40	34	55	44	37	32	37	31	27	30	26	22	23	20	18	15
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13
8	52	39	31	26	47	36	29	24	30	25	21	25	20	17	19	16	14	12
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	10
10	45	33	25	21	41	30	24	19	25	20	17	21	17	14	17	14	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9752	9752	9752
5°	9782	9507	9512
10°	9694	9287	9240
15°	9570	9038	8945
20°	9390	8755	8621
25°	9171	8428	8278
30°	8945	8133	7931
35°	8692	7823	7655
40°	8450	7540	7358
45°	8182	7269	7122
50°	7918	7000	6860
55°	7627	6725	6625
60°	7343	6446	6385
65°	7051	6149	6098
70°	6611	5815	5805
75°	6055	5432	5506
80°	5416	5056	5164
85°	4828	4799	4966



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.9	1.3
10°-20°	244.8	3.7
20°-30°	366.2	5.6
30°-40°	437.3	6.7
40°-50°	457.5	7.0
50°-60°	429.4	6.6
60°-70°	358.6	5.5
70°-80°	256.6	3.9
80°-90°	156.6	2.4
90°-100°	354.6	5.4
100°-110°	802.9	12.3
110°-120°	767.6	11.7
120°-130°	601.6	9.2
130°-140°	465.2	7.1
140°-150°	340.8	5.2
150°-160°	235.7	3.6
160°-170°	138.5	2.1
170°-180°	45.1	0.7
0°-30°	696.9	10.6
0°-40°	1134.2	17.3
0°-60°	2021.1	30.9
0°-90°	2792.8	42.7
90°-120°	1925.2	29.4
90°-150°	3332.7	50.9
90°-180°	3752.0	57.3
0°-180°	6544.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	906	906	906	906	906	
5°	907	905	899	906	906	86
15°	864	866	866	875	874	243
25°	780	789	792	805	805	359
35°	671	687	700	714	718	420
45°	549	572	597	615	624	423
55°	418	451	486	512	521	375
65°	289	328	371	400	411	286
75°	157	203	253	284	297	168
85°	48	98	150	182	193	51
90°	15	73	135	170	182	11
95°	43	154	656	290	247	43
105°	117	194	830	1423	1307	124
115°	198	258	631	1344	1539	196
125°	271	321	572	1030	1207	241
135°	316	377	544	835	965	244
145°	360	411	526	669	739	225
155°	407	439	509	579	603	187
165°	445	458	487	517	526	125
175°	464	464	468	474	473	44
180°	465	465	465	465	465	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0
2.5°	909.9	909.4	908.9	908.3	907.9	906.8	905.5	904.1	902.7	901.3	902.7
5°	907.0	906.5	906.1	905.7	905.2	904.4	903.1	901.7	900.4	899.1	900.9
7.5°	898.1	898.1	898.2	898.3	898.4	897.9	896.5	895.3	894.0	892.8	894.9
10°	890.2	890.6	891.1	891.6	891.9	891.6	890.5	889.5	888.3	887.2	889.5
12.5°	880.7	881.4	881.9	882.6	883.2	883.2	882.4	881.7	880.9	880.1	882.1
15°	863.6	864.2	864.9	865.5	866.2	866.4	866.2	866.0	865.7	865.5	867.7
17.5°	841.9	843.2	844.5	845.7	847.1	847.7	847.6	847.5	847.4	847.3	849.3
20°	826.0	827.4	828.7	830.0	831.3	832.2	832.6	833.1	833.5	834.0	835.9
22.5°	809.5	810.8	812.1	813.4	814.7	815.7	816.3	816.9	817.6	818.1	820.7
25°	779.7	781.8	784.0	786.3	788.4	789.9	790.5	791.2	791.8	792.5	795.3
27.5°	749.7	752.1	754.7	757.1	759.7	761.6	763.0	764.4	765.8	767.2	769.7
30°	728.3	731.2	734.1	736.9	739.7	742.1	743.8	745.6	747.3	749.0	751.7
32.5°	704.6	707.8	711.1	714.3	717.5	720.2	722.5	724.8	727.1	729.3	732.2
35°	671.1	674.6	678.2	681.6	685.1	688.3	691.2	694.0	696.9	699.7	703.0
37.5°	635.6	639.5	643.5	647.4	651.4	655.1	658.6	662.1	665.6	669.1	672.9
40°	611.9	615.9	619.8	623.8	627.6	631.9	636.2	640.6	645.0	649.4	653.1
42.5°	585.8	590.7	595.5	600.3	605.1	609.8	614.3	619.0	623.5	628.1	632.2
45°	548.7	554.0	559.2	564.5	569.8	575.1	580.6	586.1	591.6	597.1	601.2
47.5°	509.8	515.9	521.8	527.7	533.7	539.8	546.1	552.3	558.6	564.9	569.6
50°	484.6	490.7	496.8	503.0	509.2	515.6	522.5	529.2	536.0	542.8	547.8
52.5°	457.7	464.2	470.7	477.2	483.7	490.7	498.2	505.7	513.2	520.7	525.9
55°	418.5	425.7	432.9	440.2	447.4	455.0	462.9	470.8	478.6	486.5	492.5
57.5°	380.1	387.7	395.2	402.7	410.4	418.4	427.1	435.7	444.3	453.0	458.9
60°	353.4	361.2	369.1	377.0	384.9	393.3	402.4	411.3	420.3	429.3	435.5
62.5°	328.0	336.1	344.2	352.2	360.3	369.1	378.6	388.1	397.7	407.2	413.3
65°	289.2	297.7	306.2	314.8	323.4	332.4	342.1	351.8	361.5	371.1	377.7
67.5°	249.7	258.7	267.9	276.9	286.0	295.5	305.3	315.1	324.9	334.8	342.0
70°	222.1	231.5	240.9	250.3	259.8	269.8	280.3	290.8	301.3	311.9	318.9
72.5°	196.8	206.2	215.7	225.1	234.5	244.7	255.5	266.5	277.3	288.1	295.4
75°	156.9	167.2	177.6	187.8	198.1	208.8	219.7	230.7	241.7	252.7	259.9
77.5°	122.2	132.6	143.0	153.4	163.7	174.5	185.6	196.6	207.6	218.7	226.3
80°	97.7	108.5	119.2	130.0	140.7	151.7	163.2	174.6	186.0	197.4	204.8
82.5°	76.3	87.3	98.2	109.1	120.1	131.3	142.9	154.5	166.1	177.7	185.1
85°	48.4	59.3	70.3	81.2	92.2	103.5	115.2	126.8	138.4	150.1	157.5
87.5°	26.7	37.9	49.2	60.7	72.0	83.4	95.2	107.0	118.7	130.4	137.7
90°	14.7	27.3	40.0	53.5	66.2	79.0	93.0	107.1	121.0	135.1	141.6
92.5°	23.8	39.0	56.6	73.7	91.2	115.6	151.2	202.6	253.4	249.9	221.6
95°	42.9	54.2	73.1	97.6	130.7	177.0	267.8	418.7	583.7	655.6	557.0
97.5°	64.3	72.9	88.7	110.4	142.1	190.9	277.5	445.8	713.3	955.2	1022.2
100°	78.5	86.4	100.1	120.3	149.9	195.1	271.1	420.4	677.9	976.9	1168.6
102.5°	93.5	101.5	113.7	132.4	159.0	200.9	269.8	397.9	628.2	923.1	1171.1
105°	117.1	125.1	136.0	152.6	175.7	212.3	272.5	378.8	566.1	830.5	1106.6
107.5°	141.1	148.4	158.3	173.9	195.1	228.8	282.5	371.9	524.2	747.9	998.9
110°	158.3	165.1	173.7	188.0	208.0	240.7	291.8	372.1	506.9	701.1	931.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	174.9	181.0	188.9	202.6	221.8	253.2	301.0	375.6	495.0	667.7	871.8
115°	197.8	204.2	212.4	224.5	243.2	273.8	317.4	382.8	486.6	630.9	798.9
117.5°	221.5	227.4	233.8	244.0	263.5	291.6	334.4	392.9	481.8	606.0	751.9
120°	237.2	241.2	246.9	257.5	276.4	304.2	345.3	401.4	481.1	593.7	726.7
122.5°	251.6	255.0	260.2	271.0	288.7	317.4	357.4	409.4	482.8	584.5	705.3
125°	271.1	273.0	278.6	289.0	306.9	335.5	374.8	422.4	485.3	571.7	676.9
127.5°	286.7	289.4	296.1	306.4	325.9	353.8	390.9	433.4	489.5	562.3	651.1
130°	296.5	299.1	307.4	318.4	338.0	365.4	400.9	441.0	492.5	556.1	636.5
132.5°	303.2	306.8	315.9	329.4	349.1	375.5	409.3	447.9	493.9	551.4	622.5
135°	316.2	319.7	329.9	343.7	363.4	389.8	421.4	455.8	495.9	544.3	603.8
137.5°	328.5	332.2	342.2	357.0	376.5	400.6	430.0	461.8	496.6	537.5	587.5
140°	335.9	340.6	350.1	365.0	383.9	407.7	435.7	464.6	497.2	533.7	577.4
142.5°	345.0	348.7	358.7	372.1	390.7	412.7	439.4	467.0	496.8	529.0	567.9
145°	359.5	362.0	370.3	384.2	399.9	421.5	445.9	471.4	497.7	525.9	557.8
147.5°	373.2	374.8	383.1	395.3	410.8	429.2	451.6	474.4	497.7	522.4	548.7
150°	383.0	383.9	391.3	403.6	416.8	433.8	455.3	475.1	497.7	519.3	542.8
152.5°	392.7	392.9	400.4	411.1	422.8	439.0	457.6	476.6	495.4	515.6	536.9
155°	407.4	407.4	413.0	422.4	432.8	445.9	461.9	477.0	492.9	509.0	527.8
157.5°	419.1	419.8	424.3	432.6	441.4	451.6	464.4	478.0	489.8	503.1	517.6
160°	428.1	428.1	431.9	439.3	445.9	455.3	466.7	478.0	488.3	498.6	510.9
162.5°	434.9	434.9	437.9	443.8	449.7	457.6	467.4	477.2	485.3	494.1	504.1
165°	445.0	444.0	445.9	450.6	454.4	461.0	468.5	475.1	480.8	487.4	494.8
167.5°	452.7	451.6	452.5	456.1	458.7	462.9	468.3	473.6	476.3	480.6	486.1
170°	457.2	455.3	456.3	459.1	461.0	462.9	467.6	471.4	473.3	476.1	480.8
172.5°	460.2	459.1	459.3	461.4	462.5	463.6	467.6	470.6	471.0	472.3	475.5
175°	463.8	462.9	461.9	463.8	463.8	464.8	466.7	468.5	467.6	467.6	469.5
177.5°	465.5	464.8	464.0	464.8	464.8	464.8	465.5	467.0	465.5	464.8	465.5
180°	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0
2.5°	904.1	905.5	906.8	907.5	907.3	907.1	906.9	906.8
5°	902.6	904.4	906.1	906.8	906.6	906.4	906.3	906.0
7.5°	897.1	899.4	901.5	902.5	902.2	902.0	901.7	901.4
10°	891.6	893.8	896.0	896.9	896.5	896.0	895.6	895.1
12.5°	884.2	886.2	888.2	889.0	888.5	888.2	887.7	887.2
15°	869.9	872.1	874.3	875.2	875.1	874.9	874.6	874.4
17.5°	851.3	853.3	855.3	856.1	855.8	855.5	855.2	854.9
20°	837.9	839.9	841.9	842.9	843.2	843.4	843.6	843.9
22.5°	823.1	825.7	828.1	829.3	829.2	829.1	829.0	828.8
25°	798.2	801.1	803.9	805.3	805.3	805.3	805.3	805.3
27.5°	772.1	774.6	777.0	778.4	778.5	778.7	778.9	779.1
30°	754.3	757.0	759.6	760.9	760.9	760.9	760.9	760.9
32.5°	734.9	737.7	740.6	742.3	742.7	743.3	743.8	744.3
35°	706.3	709.6	712.8	715.0	715.9	716.7	717.6	718.5
37.5°	676.6	680.3	684.0	686.3	686.9	687.7	688.3	689.1
40°	656.9	660.5	664.3	666.6	667.5	668.4	669.2	670.1
42.5°	636.2	640.3	644.4	647.1	648.3	649.5	650.7	652.0
45°	605.4	609.5	613.8	616.7	618.5	620.2	622.0	623.8
47.5°	574.3	579.0	583.7	586.7	588.1	589.5	590.8	592.1
50°	552.9	557.9	563.0	566.3	567.8	569.3	570.9	572.4
52.5°	531.1	536.4	541.6	545.2	547.1	548.9	550.8	552.7
55°	498.4	504.4	510.2	514.1	515.9	517.6	519.3	521.1
57.5°	465.0	470.9	476.8	480.9	483.0	485.0	487.0	489.1
60°	441.6	447.7	453.8	458.2	460.5	463.0	465.4	467.8
62.5°	419.5	425.7	431.8	435.9	438.2	440.5	442.7	444.9
65°	384.3	390.8	397.4	401.8	404.0	406.1	408.4	410.6
67.5°	349.1	356.4	363.5	368.1	369.9	371.7	373.6	375.4
70°	325.9	332.9	340.0	344.5	346.8	348.9	351.1	353.4
72.5°	302.6	309.7	317.0	321.7	323.9	326.0	328.2	330.5
75°	267.1	274.4	281.6	286.5	289.2	291.8	294.5	297.1
77.5°	233.9	241.6	249.2	254.0	256.1	258.1	260.1	262.1
80°	212.3	219.7	227.2	232.1	234.2	236.4	238.7	240.8
82.5°	192.6	200.0	207.5	212.3	214.5	216.7	218.9	221.0
85°	164.9	172.4	179.8	184.6	186.8	189.1	191.2	193.4
87.5°	145.3	153.0	160.6	165.9	167.9	170.2	172.6	174.7
90°	150.0	158.3	166.7	173.4	174.7	177.9	181.0	182.2
92.5°	199.0	189.9	189.8	189.6	189.9	189.1	192.1	192.4
95°	450.0	347.7	304.6	275.2	259.6	253.3	248.8	247.3
97.5°	948.0	786.5	671.7	563.5	496.2	456.1	432.9	427.0
100°	1207.8	1137.9	1034.3	904.9	812.1	745.6	711.1	714.3
102.5°	1290.8	1294.5	1236.5	1156.0	1084.3	1032.1	1003.6	984.2
105°	1309.4	1409.6	1433.6	1413.2	1371.9	1338.1	1310.0	1307.3
107.5°	1227.8	1386.5	1474.8	1512.1	1514.9	1504.8	1496.5	1489.8
110°	1152.7	1331.5	1455.9	1525.4	1553.5	1562.7	1562.6	1562.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1077.7	1260.1	1398.5	1486.9	1536.9	1562.2	1571.3	1573.6
115°	978.3	1147.3	1290.8	1396.8	1469.1	1512.3	1532.9	1539.4
117.5°	904.1	1050.7	1180.1	1287.5	1362.8	1411.9	1440.8	1448.9
120°	864.4	996.5	1114.4	1212.8	1288.5	1342.8	1366.9	1374.1
122.5°	832.3	952.1	1061.6	1153.0	1220.6	1269.6	1296.0	1304.7
125°	788.7	895.9	990.8	1069.1	1131.0	1173.8	1198.9	1207.0
127.5°	750.0	845.7	931.5	1003.0	1058.1	1095.0	1117.7	1125.2
130°	725.3	814.2	894.6	961.2	1012.4	1047.6	1068.7	1077.5
132.5°	702.2	784.1	859.0	922.7	971.1	1006.4	1025.4	1032.2
135°	670.8	741.5	806.6	862.8	910.0	939.3	957.3	965.0
137.5°	642.0	700.1	756.3	805.1	844.9	874.6	890.0	895.4
140°	624.9	676.2	724.6	767.2	804.1	831.5	847.7	847.8
142.5°	608.2	652.3	694.5	731.7	763.3	787.7	802.3	802.5
145°	589.7	622.5	654.3	682.9	707.3	727.9	736.3	739.1
147.5°	574.6	599.7	624.5	644.6	663.3	677.4	685.3	686.9
150°	564.5	586.2	605.9	624.0	638.6	649.3	655.4	655.8
152.5°	556.2	574.9	592.4	607.3	618.4	628.1	631.6	631.7
155°	543.8	558.8	573.0	584.3	592.8	600.2	602.1	603.0
157.5°	530.7	543.2	554.1	563.0	570.3	576.0	577.5	577.3
160°	523.1	533.5	542.8	549.4	556.0	561.7	561.7	560.7
162.5°	514.1	522.9	531.6	537.4	541.8	546.6	546.6	545.6
165°	502.4	508.0	514.6	519.3	523.1	526.9	525.9	525.9
167.5°	492.2	496.5	500.3	503.7	505.4	508.0	507.1	507.1
170°	485.5	488.3	492.0	493.9	494.8	496.7	495.8	495.8
172.5°	479.5	481.5	484.6	485.7	485.9	487.8	486.1	485.3
175°	471.4	472.3	474.2	474.2	474.2	475.1	474.2	473.3
177.5°	466.3	467.0	467.8	467.8	467.0	467.8	466.3	466.3
180°	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8

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