

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: P332583-830

Luminaire Tested: **S124DIP-S795D365U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332583-830  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIP-S795D365U830-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 365 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4430.9 lumens  
Efficiency: N/A  
Efficacy: 126.6 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: Semi-Direct

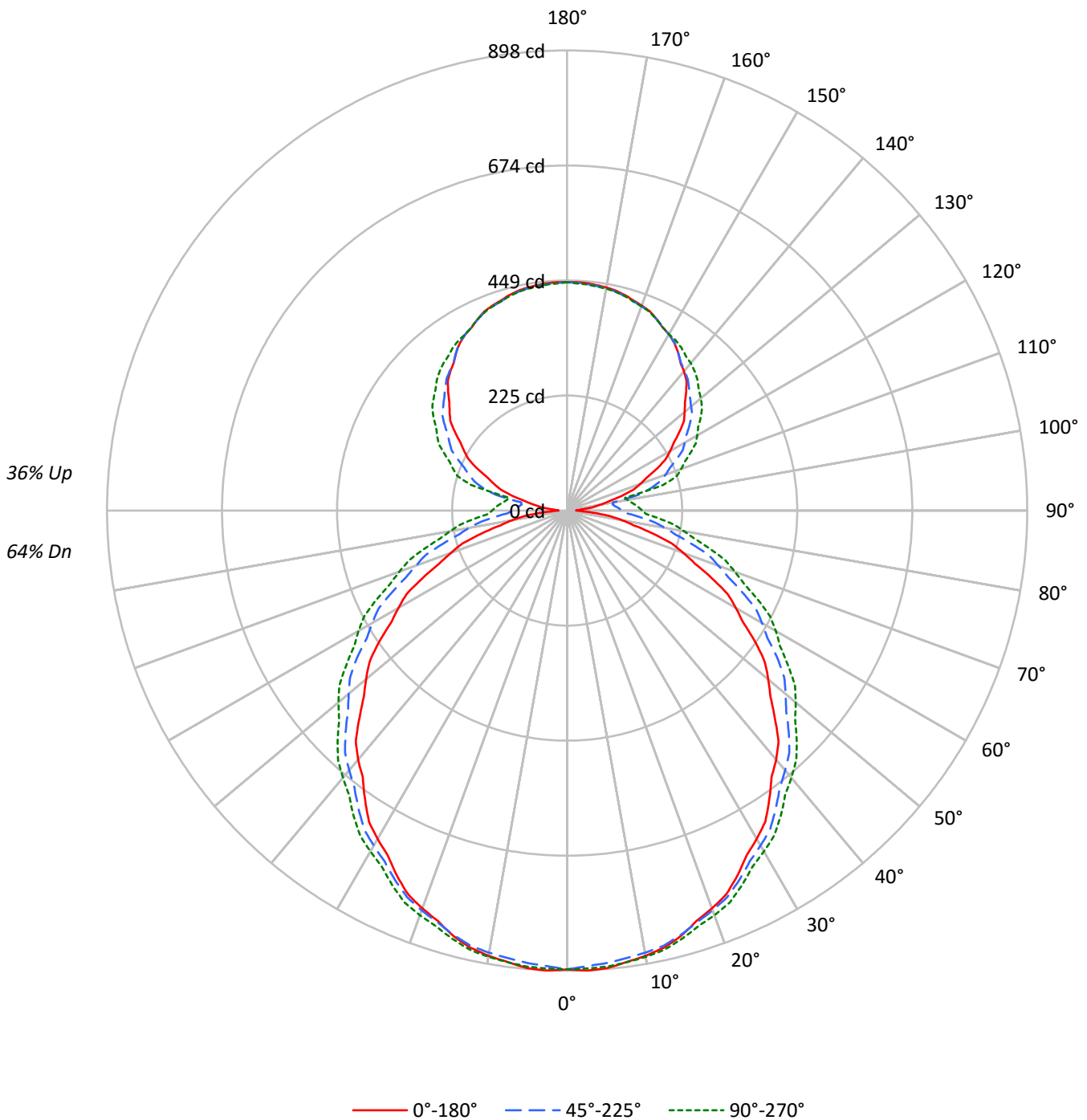
Input Watts (W): 35  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	110	110	110	110	104	104	104	104	91	91	91	79	79	79	69	69	69	64
1	100	95	90	86	93	89	85	81	78	75	72	68	66	64	59	57	55	51
2	90	82	75	69	84	77	71	66	68	63	59	59	55	52	51	48	46	42
3	82	72	64	57	76	67	60	54	59	53	49	52	47	43	45	41	38	35
4	75	63	55	48	70	59	52	46	52	46	41	46	41	37	40	36	33	29
5	69	56	47	41	64	53	45	39	47	40	35	41	36	32	36	31	28	25
6	63	50	42	35	59	47	40	34	42	36	31	37	32	28	32	28	25	22
7	58	45	37	31	54	43	35	30	38	32	27	34	28	24	29	25	22	19
8	54	41	33	27	51	39	31	26	35	28	24	31	25	22	27	23	19	17
9	50	38	30	24	47	36	28	23	32	26	21	28	23	19	25	21	18	15
10	47	34	27	22	44	33	26	21	29	23	19	26	21	18	23	19	16	14

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

	0°	45°	90°
0°	7228	7228	7228
5°	7250	7064	7083
10°	7205	6948	6943
15°	7141	6814	6777
20°	7044	6667	6616
25°	6934	6501	6439
30°	6815	6336	6256
35°	6681	6168	6097
40°	6573	6008	5930
45°	6413	5859	5787
50°	6278	5689	5636
55°	6138	5529	5459
60°	5920	5324	5298
65°	5683	5104	5098
70°	5394	4853	4868
75°	4992	4579	4659
80°	4540	4312	4453
85°	3980	4075	4334



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.8	1.9
10°-20°	242.9	5.5
20°-30°	367.3	8.3
30°-40°	444.4	10.0
40°-50°	469.8	10.6
50°-60°	442.2	10.0
60°-70°	366.8	8.3
70°-80°	257.7	5.8
80°-90°	147.0	3.3
90°-100°	101.7	2.3
100°-110°	161.1	3.6
110°-120°	228.8	5.2
120°-130°	260.1	5.9
130°-140°	262.8	5.9
140°-150°	238.1	5.4
150°-160°	190.3	4.3
160°-170°	122.7	2.8
170°-180°	42.3	1.0
0°-30°	695.0	15.7
0°-40°	1139.4	25.7
0°-60°	2051.4	46.3
0°-90°	2822.9	63.7
90°-120°	491.6	11.1
90°-150°	1252.7	28.3
90°-180°	1608.0	36.3
0°-180°	4430.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	895	895	895	895	895	
5°	896	893	886	894	893	85
15°	859	860	857	866	865	242
25°	786	792	795	806	807	362
35°	688	700	710	723	727	431
45°	573	593	612	628	634	443
55°	449	471	500	520	526	400
65°	311	343	377	401	410	308
75°	172	210	252	279	289	183
85°	53	95	140	169	180	57
90°	17	61	107	136	146	11
95°	31	54	94	123	133	34
105°	109	132	170	196	194	115
115°	193	204	235	257	265	191
125°	267	269	292	311	318	239
135°	328	329	336	353	360	253
145°	377	377	377	384	388	236
155°	413	413	412	413	412	190
165°	435	434	434	436	433	123
175°	445	444	444	446	443	42
180°	445	445	445	445	445	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3
2.5°	898.5	898.0	897.4	896.9	896.4	895.4	893.9	892.5	891.1	889.7	890.9
5°	896.3	895.6	894.9	894.3	893.6	892.5	890.9	889.4	887.8	886.3	888.1
7.5°	888.6	888.3	887.9	887.5	887.0	886.2	885.0	883.6	882.3	881.1	883.1
10°	882.2	882.0	881.8	881.6	881.4	880.7	879.6	878.4	877.3	876.2	878.3
12.5°	873.5	873.4	873.4	873.3	873.3	872.9	872.1	871.3	870.5	869.8	871.7
15°	859.2	859.4	859.6	859.9	860.1	859.9	859.2	858.6	857.8	857.1	859.2
17.5°	839.7	840.4	841.0	841.8	842.4	842.6	842.5	842.4	842.3	842.2	844.2
20°	826.1	826.8	827.5	828.1	828.8	829.2	829.4	829.6	829.9	830.1	832.4
22.5°	810.9	811.7	812.6	813.4	814.3	814.9	815.3	815.7	816.1	816.5	818.7
25°	786.0	787.3	788.7	790.0	791.4	792.4	793.1	793.7	794.4	795.0	797.5
27.5°	758.4	760.3	762.2	764.2	766.2	767.7	768.7	769.7	770.7	771.8	774.0
30°	739.9	741.7	743.5	745.3	747.1	748.7	750.3	751.8	753.4	754.9	757.3
32.5°	719.8	722.0	724.2	726.2	728.4	730.3	732.1	733.8	735.6	737.3	740.1
35°	687.8	690.4	693.1	695.8	698.4	700.9	703.1	705.4	707.6	709.8	712.9
37.5°	655.4	658.6	661.7	664.7	667.8	670.7	673.4	676.2	679.0	681.7	684.9
40°	634.6	637.5	640.4	643.3	646.2	649.2	652.3	655.4	658.6	661.7	665.1
42.5°	610.6	613.8	617.1	620.3	623.6	627.0	630.7	634.3	638.0	641.6	645.4
45°	573.4	577.7	581.9	586.2	590.4	594.7	598.9	603.1	607.3	611.5	615.4
47.5°	538.0	542.3	546.7	551.1	555.4	560.1	565.0	569.9	574.8	579.7	583.6
50°	512.3	517.2	522.1	527.0	531.9	536.8	541.7	546.6	551.5	556.4	560.9
52.5°	486.6	491.5	496.4	501.3	506.2	511.5	517.1	522.7	528.4	534.0	538.4
55°	449.1	453.8	458.5	463.2	467.9	473.5	480.2	486.9	493.6	500.3	504.7
57.5°	407.3	413.0	418.9	424.6	430.4	436.6	443.3	449.9	456.6	463.2	468.4
60°	379.9	385.8	391.5	397.4	403.1	409.7	417.1	424.4	431.8	439.1	444.2
62.5°	353.5	359.9	366.2	372.5	378.8	385.7	393.0	400.4	407.7	415.1	420.2
65°	310.8	317.9	325.1	332.2	339.3	346.7	354.2	361.8	369.4	376.9	382.5
67.5°	269.7	277.3	284.8	292.4	300.0	307.8	315.9	324.0	332.2	340.3	345.9
70°	241.6	249.2	256.7	264.4	271.9	279.9	288.4	296.9	305.3	313.8	319.8
72.5°	214.3	222.1	229.9	237.6	245.3	253.7	262.8	271.7	280.8	289.7	295.6
75°	172.5	180.7	188.9	197.2	205.4	214.2	223.6	232.9	242.3	251.7	257.9
77.5°	133.4	142.0	150.8	159.6	168.2	177.6	187.4	197.2	207.0	216.8	223.1
80°	109.2	118.2	127.1	136.0	145.0	154.3	164.1	173.9	183.7	193.5	200.2
82.5°	85.2	94.4	103.8	113.0	122.2	131.9	141.7	151.5	161.3	171.1	177.9
85°	53.2	62.5	71.8	81.2	90.6	100.3	110.3	120.3	130.4	140.3	147.0
87.5°	29.9	39.1	48.4	57.6	66.9	76.4	86.3	96.2	106.0	115.9	122.5
90°	17.1	26.8	36.5	46.2	56.0	65.9	76.1	86.2	96.4	106.6	113.5
92.5°	19.4	27.5	35.5	43.6	51.7	60.8	71.0	81.2	91.3	101.5	108.2
95°	31.4	36.2	41.0	45.9	50.7	57.7	66.9	76.2	85.3	94.5	101.0
97.5°	50.7	58.6	66.5	74.5	82.3	86.6	87.5	88.2	89.0	89.8	95.7
100°	65.7	72.8	79.9	87.0	94.2	97.0	95.4	93.9	92.4	90.9	95.6
102.5°	83.2	89.3	95.4	101.4	107.4	114.0	121.3	128.5	135.6	142.8	135.1
105°	109.3	114.1	119.0	123.9	128.8	135.6	144.3	152.9	161.5	170.1	176.3
107.5°	135.2	139.0	142.9	146.8	150.6	156.7	165.0	173.3	181.6	189.9	195.8
110°	151.9	155.2	158.6	161.9	165.3	171.1	179.4	187.6	195.8	204.1	209.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	168.1	171.4	174.5	177.7	180.8	186.2	193.9	201.5	209.2	216.8	221.8
115°	193.2	195.5	197.7	199.9	202.2	206.8	213.9	220.8	227.9	235.0	240.1
117.5°	216.7	218.2	219.7	221.2	222.6	226.8	233.7	240.4	247.2	254.0	258.6
120°	231.9	232.8	233.8	234.8	235.7	239.4	245.8	252.1	258.5	264.9	269.6
122.5°	246.8	247.1	247.4	247.7	248.0	251.3	257.5	263.7	269.9	276.2	280.7
125°	267.2	267.2	267.3	267.4	267.5	270.2	275.6	281.1	286.4	291.9	296.3
127.5°	287.2	287.1	286.9	286.8	286.6	288.9	293.5	298.1	302.7	307.4	311.3
130°	299.4	299.4	299.2	299.1	298.9	300.7	304.4	308.3	312.1	315.8	319.9
132.5°	311.5	311.4	311.3	311.2	311.1	312.6	315.8	318.9	322.1	325.2	329.0
135°	328.5	328.4	328.3	328.2	328.2	329.0	330.9	332.7	334.6	336.5	340.2
137.5°	344.4	344.2	344.0	343.8	343.6	344.0	345.2	346.2	347.3	348.4	351.8
140°	354.8	354.7	354.6	354.6	354.5	354.6	355.0	355.3	355.7	356.1	359.2
142.5°	363.3	363.5	363.7	363.9	364.2	364.3	364.2	364.2	364.1	364.1	366.7
145°	377.4	377.4	377.4	377.4	377.4	377.4	377.4	377.4	377.4	377.4	378.8
147.5°	388.8	389.0	389.2	389.4	389.6	389.6	389.6	389.5	389.4	389.4	389.6
150°	397.1	397.1	397.2	397.3	397.4	397.4	397.3	397.2	397.1	397.1	397.1
152.5°	403.2	403.4	403.6	403.8	404.0	404.0	403.9	403.7	403.6	403.5	403.6
155°	412.7	412.8	412.8	412.9	413.0	412.9	412.7	412.5	412.3	412.1	412.4
157.5°	420.9	420.8	420.8	420.8	420.8	420.6	420.4	420.1	419.8	419.6	420.0
160°	425.7	425.5	425.3	425.1	424.8	424.7	424.6	424.5	424.4	424.3	424.8
162.5°	430.0	429.7	429.4	429.1	428.9	428.7	428.6	428.5	428.5	428.4	428.9
165°	435.4	435.0	434.6	434.2	433.9	433.7	433.7	433.7	433.7	433.7	434.3
167.5°	439.6	439.2	438.8	438.5	438.1	437.9	437.8	437.8	437.7	437.7	438.4
170°	442.1	441.6	441.1	440.7	440.3	440.1	440.2	440.3	440.3	440.4	440.9
172.5°	443.7	443.2	442.7	442.3	441.9	441.7	441.8	441.9	441.9	442.0	442.5
175°	445.4	444.9	444.5	444.0	443.6	443.4	443.5	443.6	443.7	443.7	444.4
177.5°	446.2	445.7	445.4	444.9	444.5	444.3	444.5	444.6	444.7	444.8	445.4
180°	445.4	445.4	445.4	445.4	445.4	445.4	445.4	445.4	445.4	445.4	445.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3
2.5°	892.1	893.4	894.7	895.2	895.0	894.8	894.7	894.5
5°	889.9	891.6	893.3	894.2	893.9	893.7	893.5	893.2
7.5°	885.0	887.0	889.1	889.9	889.8	889.5	889.3	889.1
10°	880.2	882.2	884.3	885.1	885.0	884.7	884.5	884.3
12.5°	873.5	875.3	877.1	878.0	878.0	877.9	877.9	877.8
15°	861.2	863.2	865.2	866.1	865.9	865.6	865.4	865.2
17.5°	846.2	848.3	850.4	851.3	851.1	850.9	850.7	850.6
20°	834.5	836.8	839.1	840.2	840.2	840.2	840.2	840.2
22.5°	821.0	823.1	825.4	826.7	827.1	827.4	827.7	828.1
25°	799.9	802.4	804.8	806.2	806.3	806.6	806.8	807.1
27.5°	776.3	778.5	780.9	782.1	782.4	782.7	783.0	783.2
30°	759.8	762.2	764.7	766.2	766.7	767.0	767.5	768.0
32.5°	742.9	745.7	748.5	750.2	750.5	751.0	751.5	752.0
35°	716.0	719.2	722.3	724.2	724.8	725.5	726.2	726.9
37.5°	688.1	691.3	694.4	696.4	697.0	697.8	698.4	699.2
40°	668.4	671.8	675.0	677.1	678.1	678.9	679.9	680.7
42.5°	649.0	652.7	656.4	658.6	659.3	660.1	660.8	661.5
45°	619.2	622.9	626.7	629.1	630.3	631.4	632.5	633.6
47.5°	587.5	591.4	595.4	597.9	599.4	600.7	602.0	603.3
50°	565.3	569.8	574.2	577.1	578.4	579.9	581.2	582.5
52.5°	542.9	547.3	551.8	554.7	556.0	557.3	558.6	560.1
55°	509.2	513.7	518.1	521.0	522.4	523.7	525.0	526.3
57.5°	473.8	479.1	484.4	487.7	488.9	490.1	491.4	492.7
60°	449.4	454.5	459.6	463.1	464.9	466.7	468.4	470.2
62.5°	425.3	430.5	435.5	439.0	440.8	442.6	444.3	446.1
65°	388.1	393.7	399.3	402.9	404.7	406.5	408.2	410.0
67.5°	351.6	357.2	362.9	366.6	368.3	370.0	371.8	373.5
70°	325.8	331.9	337.9	341.7	343.2	344.8	346.3	347.9
72.5°	301.4	307.3	313.1	316.9	318.6	320.4	322.1	323.9
75°	264.1	270.3	276.6	280.7	282.8	284.7	286.7	288.7
77.5°	229.4	235.7	242.0	246.3	248.5	250.5	252.7	254.9
80°	206.9	213.6	220.3	224.4	226.2	228.0	229.8	231.6
82.5°	184.7	191.6	198.5	202.9	204.8	206.8	208.8	210.8
85°	153.7	160.4	167.1	171.5	173.8	176.0	178.2	180.5
87.5°	129.0	135.6	142.1	146.5	148.5	150.4	152.4	154.4
90°	120.4	127.3	134.2	138.6	140.5	142.5	144.4	146.4
92.5°	115.0	121.7	128.4	132.7	134.5	136.3	138.1	140.0
95°	107.4	114.0	120.4	124.7	126.8	128.8	130.9	133.0
97.5°	101.6	107.4	113.3	117.3	119.2	121.2	123.2	125.3
100°	100.4	105.1	109.9	113.1	114.7	116.3	118.0	119.6
102.5°	127.3	119.6	111.9	108.9	110.6	112.4	114.1	115.8
105°	182.6	188.8	195.0	197.7	196.8	196.0	195.1	194.2
107.5°	201.5	207.4	213.2	217.0	218.9	220.7	222.6	224.5
110°	214.6	219.9	225.2	228.8	230.7	232.8	234.8	236.8





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	226.7	231.6	236.5	240.0	242.0	244.1	246.2	248.3
115°	245.1	250.2	255.1	258.5	260.0	261.6	263.2	264.8
117.5°	263.3	267.9	272.5	275.6	277.4	279.1	280.9	282.7
120°	274.2	278.7	283.3	286.4	288.1	289.7	291.3	293.0
122.5°	285.2	289.7	294.3	297.3	298.8	300.2	301.7	303.1
125°	300.8	305.3	309.7	312.6	314.1	315.5	316.9	318.3
127.5°	315.3	319.2	323.2	325.9	327.3	328.9	330.3	331.7
130°	324.0	328.1	332.2	334.9	336.2	337.5	338.9	340.3
132.5°	333.0	336.9	340.8	343.4	344.7	345.9	347.2	348.5
135°	343.9	347.6	351.3	353.9	355.4	356.8	358.4	359.9
137.5°	355.2	358.6	362.0	364.3	365.3	366.5	367.5	368.5
140°	362.3	365.4	368.5	370.7	371.9	373.1	374.3	375.5
142.5°	369.5	372.2	374.9	376.7	377.7	378.6	379.6	380.5
145°	380.2	381.6	383.0	384.3	385.3	386.3	387.4	388.4
147.5°	389.8	390.0	390.3	390.8	391.6	392.4	393.1	394.0
150°	397.1	397.1	397.1	397.1	397.2	397.3	397.3	397.4
152.5°	403.7	403.8	404.0	404.0	403.9	403.9	403.9	403.8
155°	412.6	412.9	413.2	413.3	413.0	412.8	412.6	412.4
157.5°	420.4	420.8	421.1	421.1	420.8	420.4	420.0	419.6
160°	425.3	425.7	426.1	426.1	425.7	425.3	424.8	424.3
162.5°	429.2	429.7	430.2	430.1	429.6	429.1	428.6	428.1
165°	434.9	435.5	436.1	436.0	435.4	434.7	434.0	433.4
167.5°	439.0	439.7	440.3	440.3	439.5	438.8	438.0	437.3
170°	441.6	442.1	442.7	442.6	442.0	441.2	440.5	439.7
172.5°	443.2	443.7	444.3	444.2	443.5	442.6	441.9	441.0
175°	445.1	445.7	446.4	446.3	445.4	444.5	443.6	442.7
177.5°	445.8	446.3	446.8	446.6	445.9	445.2	444.5	443.7
180°	445.4	445.4	445.4	445.4	445.4	445.4	445.4	445.4

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