

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: P334106

Luminaire Tested: **S124DW-S575D927-4F0-1E-UDD-A**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334106
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-21)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DW-S575D927-4F0-1E-UDD-A
Description: DEFINE 4 DIRECT LED LUMINAIRE, ASYMMETRIC DIFFUSER
PENDANT/SURFACE/WALL MOUNT, 575 LUMENS PER FOOT
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

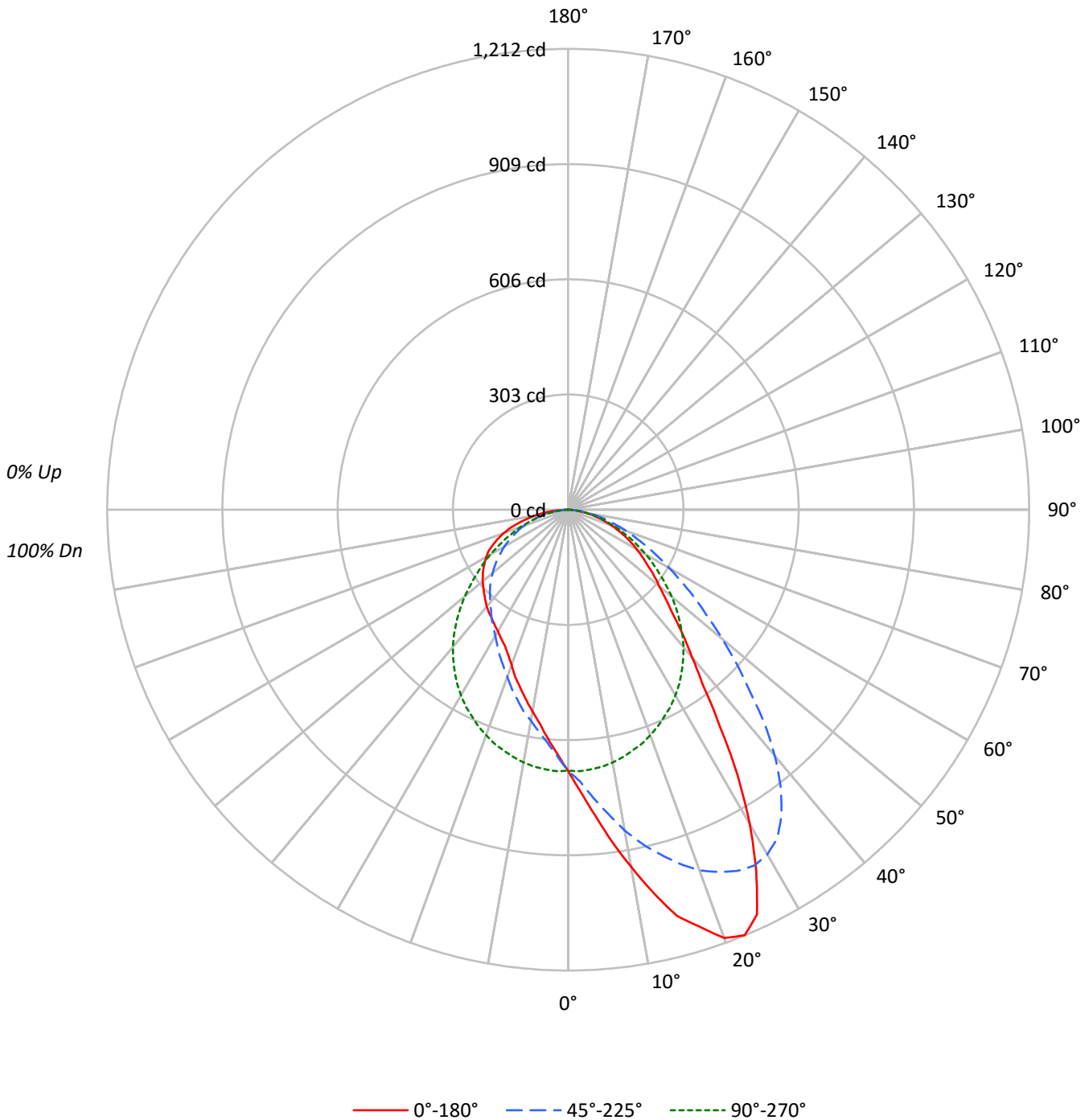
Lumens per Lamp: N/A
Luminaire Lumens: 1894.5 lumens
Efficiency: N/A
Efficacy: 100.8 lumens/watt
Spacing Criteria (0/90/45): 1.3 / 1.22 / 1.41
Luminous Opening: Rectangular (W 4' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 18.8
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	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	109	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87	85					85			
2	100	92	86	80	98	90	84	79	87	82	78	84	79	76	81	77	74	72					72			
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	62					62			
4	84	73	64	58	82	72	64	58	69	62	57	67	61	56	65	60	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	50	60	54	49	58	53	49	46					46			
6	72	59	51	44	70	58	50	44	56	49	44	55	48	43	53	47	43	41					41			
7	67	54	45	39	65	53	45	39	52	44	39	50	44	39	49	43	38	36					36			
8	62	49	41	35	61	49	41	35	47	40	35	46	40	35	45	39	35	33					33			
9	58	45	37	32	57	45	37	32	44	37	32	43	36	32	42	36	31	30					30			
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	27					27			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	5543	5543	5543
5°	6527	5557	4904
10°	7815	5532	4416
15°	9246	5477	4055
20°	10296	5419	3734
25°	10463	5336	3511
30°	8902	5255	3442
35°	6844	5124	3441
40°	5335	4969	3507
45°	4448	4737	3565
50°	3915	4455	3686
55°	3586	4115	3835
60°	3362	3812	4014
65°	3129	3471	4162
70°	2861	3135	4256
75°	2555	2760	4205
80°	2143	2259	4073
85°	1584	1630	3900



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.8	3.5
10°-20°	206.2	10.9
20°-30°	327.6	17.3
30°-40°	364.0	19.2
40°-50°	331.1	17.5
50°-60°	270.5	14.3
60°-70°	193.1	10.2
70°-80°	106.3	5.6
80°-90°	28.7	1.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	600.7	31.7
0°-40°	964.7	50.9
0°-60°	1566.4	82.7
0°-90°	1894.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1894.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	687	687	687	687	687	
5°	805	761	686	616	605	82
15°	1106	939	655	516	485	313
25°	1175	1049	599	425	394	521
35°	694	978	520	351	349	440
45°	390	675	415	291	312	306
55°	255	406	292	227	272	230
65°	164	226	182	158	218	162
75°	82	106	88	88	135	87
85°	17	22	18	25	42	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	686.6	686.6	686.6	686.6	686.6	686.6	686.6	686.6	686.6	686.6	686.6
2.5°	741.7	741.4	738.6	738.0	736.0	733.5	732.9	728.4	719.3	715.0	713.9
5°	805.4	811.1	803.7	802.3	801.5	792.1	787.2	781.5	768.5	760.8	754.8
7.5°	880.0	880.2	877.1	874.0	868.6	860.6	849.8	837.3	822.2	806.9	796.1
10°	953.3	955.6	951.9	951.3	936.8	927.7	909.5	894.2	876.5	856.9	839.0
12.5°	1030.7	1026.1	1024.7	1009.6	1009.9	991.4	969.5	953.6	924.0	900.7	875.4
15°	1106.3	1100.1	1096.1	1079.3	1071.1	1048.0	1025.6	1008.2	972.7	938.8	913.2
17.5°	1150.1	1157.8	1147.6	1140.8	1118.3	1103.2	1080.7	1045.2	1018.7	976.6	947.4
20°	1198.5	1199.1	1193.9	1186.8	1170.0	1149.6	1124.5	1084.7	1051.4	1009.6	965.3
22.5°	1211.6	1211.6	1210.1	1203.6	1191.9	1176.3	1151.0	1119.4	1077.3	1031.0	986.6
25°	1174.6	1173.5	1176.0	1183.4	1178.6	1173.5	1159.0	1134.2	1096.7	1048.6	1000.8
27.5°	1069.9	1077.3	1092.7	1110.9	1124.0	1135.6	1134.8	1124.3	1097.5	1056.0	1005.1
30°	955.0	964.7	975.5	993.7	1029.0	1049.2	1071.4	1088.1	1078.8	1047.2	1000.5
32.5°	828.8	829.3	846.7	868.0	899.6	943.1	981.5	1019.9	1036.4	1023.6	986.6
35°	694.5	698.5	715.8	736.3	775.9	823.4	876.3	923.5	962.4	978.1	958.2
37.5°	581.9	594.4	607.5	630.8	666.9	709.9	766.8	825.6	882.8	917.5	921.2
40°	506.2	513.4	522.2	538.9	568.5	610.6	657.8	727.8	789.5	845.3	863.5
42.5°	446.5	449.9	454.5	469.3	490.0	531.8	573.9	633.4	695.4	764.8	798.3
45°	389.6	393.9	403.0	411.8	428.9	457.9	498.0	548.6	610.9	675.2	731.5
47.5°	347.0	349.8	355.5	365.2	380.5	400.2	434.3	477.2	538.1	600.4	660.7
50°	311.7	314.0	318.2	326.8	337.9	354.9	381.7	421.2	466.4	529.3	588.2
52.5°	283.8	284.4	287.2	292.4	300.6	314.3	335.0	366.0	407.3	461.6	520.2
55°	254.8	256.0	258.8	263.1	270.8	279.9	296.6	321.1	357.8	406.4	457.3
57.5°	230.9	232.1	234.4	236.1	242.9	250.6	264.2	281.8	310.6	353.8	400.2
60°	208.2	207.6	210.5	211.9	216.1	222.4	232.4	249.1	273.3	306.6	348.4
62.5°	186.0	185.1	187.4	189.4	191.4	196.5	204.2	216.4	234.9	264.2	298.9
65°	163.8	162.7	164.1	166.4	168.7	171.5	177.5	189.1	204.8	226.4	254.0
67.5°	141.1	142.5	142.5	143.9	145.3	149.3	153.6	162.7	173.8	191.4	215.9
70°	121.2	121.4	122.6	122.6	123.4	126.8	130.3	135.1	145.9	161.8	180.9
72.5°	101.2	102.7	101.8	103.0	103.5	105.5	107.8	112.3	121.2	132.0	147.3
75°	81.9	82.8	82.8	83.0	83.9	84.8	86.7	90.2	96.7	105.5	116.6
77.5°	63.1	63.1	63.7	64.8	64.8	66.3	68.0	70.5	74.2	80.8	87.9
80°	46.1	46.6	46.4	46.9	46.9	48.1	48.6	52.0	53.5	57.4	62.9
82.5°	30.7	31.3	31.3	32.1	32.7	32.7	33.6	34.4	35.8	39.2	40.7
85°	17.1	17.6	17.1	17.6	18.5	18.8	19.6	19.9	21.0	21.9	23.9
87.5°	6.3	7.1	7.1	7.4	8.0	8.2	8.5	8.2	9.4	9.7	10.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	686.6	686.6	686.6	686.6	686.6	686.6	686.6	686.6	686.6	686.6	686.6
2.5°	714.1	710.2	707.3	705.0	698.8	695.1	692.2	688.3	683.7	678.9	672.9
5°	748.8	739.2	732.1	721.3	711.0	702.5	693.7	685.7	676.0	665.5	657.8
7.5°	784.4	771.0	753.1	739.2	722.4	707.9	695.1	681.7	667.5	653.8	641.1
10°	818.0	799.5	779.0	754.8	732.1	711.9	693.1	674.9	657.3	639.6	624.6
12.5°	854.1	829.9	797.2	767.9	741.7	713.0	689.4	666.1	643.9	625.1	606.9
15°	885.6	852.4	817.4	779.6	746.0	714.4	683.4	655.3	631.4	606.9	589.9
17.5°	905.5	864.3	826.8	787.2	748.6	709.0	676.9	645.3	615.7	591.8	570.5
20°	925.2	884.2	834.4	794.9	746.6	705.6	666.9	630.8	599.5	573.6	551.5
22.5°	942.2	893.3	843.5	788.4	740.3	696.2	653.0	616.6	584.5	556.9	535.8
25°	946.2	891.9	837.9	786.1	731.5	680.0	641.6	599.0	564.8	536.1	513.4
27.5°	947.6	890.2	830.2	773.9	717.6	670.6	620.6	583.3	548.0	517.6	496.0
30°	944.5	883.9	818.2	755.9	699.4	647.3	605.2	563.7	527.6	497.4	474.7
32.5°	934.6	870.8	802.9	736.0	676.9	626.3	582.5	543.5	508.5	478.9	454.8
35°	913.5	851.2	779.3	710.7	650.7	599.2	560.0	519.9	484.6	456.5	433.4
37.5°	885.4	827.3	754.2	682.9	625.1	572.8	533.3	496.3	464.4	435.4	411.5
40°	846.1	796.6	723.2	654.1	590.4	541.2	504.8	471.5	440.0	413.0	390.5
42.5°	800.9	759.4	693.1	618.9	558.0	508.5	473.3	444.2	414.9	390.5	368.0
45°	745.4	717.0	653.3	585.6	521.6	475.0	441.1	414.9	389.9	365.5	346.7
47.5°	683.7	667.8	612.3	547.5	486.0	439.4	410.1	385.1	362.3	341.0	324.2
50°	621.4	614.6	568.2	506.2	448.2	405.0	375.4	354.7	335.9	317.7	302.0
52.5°	560.0	561.4	520.7	465.3	412.7	371.4	342.1	323.1	307.4	293.5	279.9
55°	497.1	505.1	472.4	421.8	373.7	336.2	309.7	292.4	281.0	268.8	258.2
57.5°	439.4	452.8	424.3	378.0	337.3	301.5	278.1	264.8	252.3	244.3	236.1
60°	383.1	395.6	374.6	337.0	299.2	269.6	247.7	236.1	225.5	220.4	215.0
62.5°	333.0	343.8	329.6	295.5	263.9	235.8	218.1	207.0	200.8	195.1	192.0
65°	285.8	295.2	281.8	256.5	228.4	205.6	190.6	181.7	174.9	172.6	168.7
67.5°	239.2	247.7	240.6	218.4	194.5	176.6	164.7	155.3	151.3	149.0	146.5
70°	198.5	207.0	199.4	180.6	163.2	148.7	137.7	132.8	128.6	127.7	123.7
72.5°	164.1	169.2	161.5	147.9	133.7	122.0	114.0	108.9	107.2	105.5	103.8
75°	128.3	133.4	128.3	116.9	106.4	97.8	90.4	88.5	85.9	85.0	83.6
77.5°	96.1	101.0	97.0	89.3	81.1	73.9	69.7	66.8	66.6	64.8	65.4
80°	69.4	72.2	68.5	63.7	57.4	52.9	50.1	48.6	46.9	46.4	47.5
82.5°	44.9	45.8	44.4	41.5	37.3	34.7	33.0	31.3	31.3	31.6	31.3
85°	25.9	25.6	25.3	22.5	21.0	19.1	17.9	17.6	17.3	17.9	18.5
87.5°	10.8	11.1	10.8	9.7	8.8	8.0	7.7	7.4	7.7	8.0	8.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	686.6	686.6	686.6	686.6	686.6	686.6	686.6	686.6	686.6	686.6	686.6
2.5°	670.1	667.5	663.8	658.7	654.4	649.9	648.7	647.0	650.4	647.6	646.7
5°	651.3	645.3	637.6	628.8	623.7	616.3	614.9	612.0	609.2	608.9	606.1
7.5°	631.7	623.4	613.7	604.6	596.7	588.7	583.6	583.0	578.5	576.2	573.4
10°	612.9	602.1	590.4	581.9	572.2	563.7	557.7	554.3	551.5	548.3	545.5
12.5°	590.7	579.0	569.9	560.6	548.6	542.6	531.8	525.3	525.3	526.2	517.6
15°	574.5	563.1	548.3	535.3	529.0	516.5	511.1	504.3	500.0	495.7	492.3
17.5°	554.6	540.7	529.3	514.5	502.8	493.4	486.0	482.4	475.5	469.3	465.0
20°	536.1	521.0	508.8	492.9	479.8	467.6	461.6	455.9	451.1	445.9	441.1
22.5°	517.3	501.4	485.8	470.4	458.5	445.4	439.7	431.4	426.9	424.6	419.8
25°	497.4	480.4	463.3	448.5	436.0	424.6	416.9	411.0	405.8	403.6	400.4
27.5°	475.8	459.0	442.8	425.8	411.3	403.0	396.7	391.9	388.8	385.4	383.9
30°	455.3	437.7	420.1	404.4	391.3	383.1	377.4	374.3	372.0	370.6	369.2
32.5°	434.6	417.2	398.5	384.5	373.1	366.0	362.0	358.9	358.1	357.8	357.5
35°	412.1	394.5	377.4	364.6	353.5	350.7	347.0	345.3	344.7	346.7	347.5
37.5°	390.5	374.0	358.1	345.3	337.9	333.3	331.9	331.6	333.6	335.3	337.3
40°	369.7	353.8	339.0	328.2	321.4	318.8	318.2	319.7	321.9	323.9	326.2
42.5°	349.5	333.9	320.8	310.9	306.6	304.3	304.9	306.3	309.7	312.3	316.0
45°	328.5	315.4	302.3	294.1	290.1	290.7	290.7	293.2	296.4	300.0	303.7
47.5°	308.9	295.5	284.4	277.3	275.3	274.5	275.9	279.3	283.6	287.8	292.9
50°	289.0	276.4	267.1	260.8	258.5	259.4	261.7	264.8	270.2	275.9	281.3
52.5°	268.8	257.7	249.1	243.5	242.0	243.7	246.0	251.4	256.0	262.2	269.0
55°	247.7	238.0	231.2	227.0	226.4	227.2	229.8	235.2	242.0	249.7	256.0
57.5°	227.0	218.7	212.2	209.0	209.3	209.9	213.9	220.4	227.2	235.5	243.5
60°	205.9	198.5	193.4	191.1	191.4	193.1	198.2	204.2	213.3	221.3	229.8
62.5°	186.0	179.7	174.9	172.9	172.3	176.6	181.5	187.7	196.8	205.9	215.3
65°	164.4	159.3	155.3	154.1	155.0	157.8	164.1	172.3	180.0	189.4	199.1
67.5°	143.3	139.1	136.2	136.8	137.7	141.6	147.0	154.1	162.7	172.3	182.3
70°	123.4	119.5	117.2	117.5	119.2	124.3	128.8	135.9	145.3	155.3	163.2
72.5°	103.0	100.7	98.7	100.1	101.8	104.9	110.9	118.0	126.0	135.1	143.6
75°	82.2	82.2	81.1	81.9	84.5	87.9	92.1	99.5	107.8	115.2	122.0
77.5°	64.6	63.7	64.3	65.1	66.8	71.1	75.9	81.3	87.9	95.6	101.2
80°	46.6	46.9	48.3	50.1	50.6	53.8	58.9	63.7	68.5	74.8	80.2
82.5°	32.1	32.4	33.0	35.3	35.8	39.2	42.1	46.9	51.2	54.9	59.2
85°	19.1	19.1	20.5	21.3	22.8	25.0	27.0	29.9	33.8	36.7	41.0
87.5°	9.1	9.1	10.2	10.8	11.7	13.1	13.7	16.8	17.9	19.3	21.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	686.6	686.6	686.6	686.6
2.5°	646.2	645.6	643.6	643.3
5°	604.4	602.9	602.1	605.2
7.5°	572.8	571.7	569.1	568.2
10°	542.6	541.5	539.2	538.7
12.5°	513.6	511.1	511.1	511.9
15°	488.6	487.5	484.3	485.2
17.5°	463.0	461.9	457.6	461.9
20°	439.1	436.8	434.9	434.6
22.5°	416.4	414.4	414.7	412.4
25°	398.2	396.2	395.6	394.2
27.5°	383.4	382.2	381.1	381.7
30°	370.0	369.7	369.2	369.2
32.5°	358.9	358.9	359.5	359.5
35°	348.7	349.5	350.1	349.2
37.5°	339.6	340.1	341.0	341.9
40°	328.8	330.8	331.3	332.8
42.5°	318.5	320.8	322.5	322.5
45°	308.0	310.3	312.3	312.3
47.5°	297.2	300.3	302.3	302.6
50°	286.1	290.1	292.1	293.5
52.5°	275.3	279.3	282.1	282.7
55°	262.5	268.2	271.3	272.5
57.5°	251.1	256.2	259.7	260.5
60°	237.5	243.2	247.7	248.6
62.5°	223.5	229.5	233.5	236.1
65°	207.0	213.0	217.0	217.9
67.5°	189.7	196.0	198.5	200.2
70°	171.2	176.0	178.9	180.3
72.5°	150.2	155.3	158.7	158.7
75°	128.6	133.1	134.8	134.8
77.5°	106.1	108.6	110.9	111.5
80°	84.5	85.9	87.6	87.6
82.5°	62.3	63.4	65.1	64.8
85°	40.4	42.9	42.7	42.1
87.5°	22.8	23.0	23.9	24.5
90°	0.0	0.0	0.0	0.0

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