

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: P243661

Luminaire Tested: **S125DR-H610D927-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243661
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-61)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125DR-H610D927-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1855.8 lumens
Efficiency: N/A
Efficacy: 107.9 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.22 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

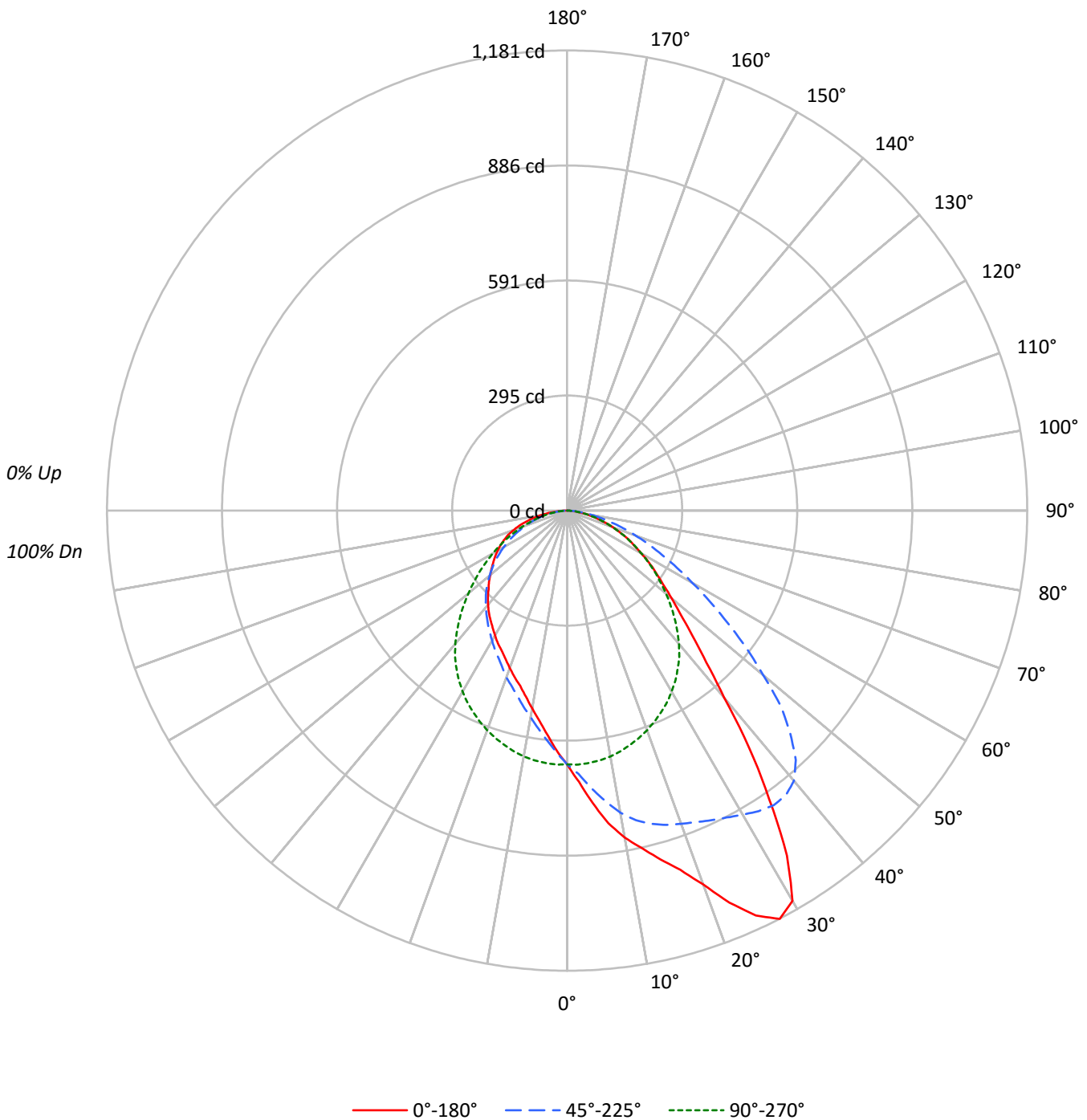
Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	86	80	97	90	84	79	87	82	78	84	79	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	63	61
4	84	73	64	58	82	71	63	57	69	62	56	66	61	56	64	59	55	53
5	78	65	56	50	75	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	40
7	67	53	45	39	65	53	44	39	51	44	38	50	43	38	48	42	38	36
8	62	49	40	35	60	48	40	35	47	40	34	46	39	34	44	38	34	32
9	58	45	37	31	57	44	36	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	4628	4628	4628
5°	5377	4638	4122
10°	6152	4623	3720
15°	6819	4581	3427
20°	7721	4536	3252
25°	8991	4477	3114
30°	9492	4404	3038
35°	7850	4296	2973
40°	5806	4141	2930
45°	4565	3915	2867
50°	3866	3661	2855
55°	3442	3409	2866
60°	3123	3130	2928
65°	2896	2869	3010
70°	2602	2568	3030
75°	2219	2255	2988
80°	1817	1850	2787
85°	1248	1313	2365



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.9	3.4
10°-20°	188.0	10.1
20°-30°	305.6	16.5
30°-40°	371.8	20.0
40°-50°	340.2	18.3
50°-60°	272.3	14.7
60°-70°	189.6	10.2
70°-80°	100.8	5.4
80°-90°	24.7	1.3
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°	556.5	30.0
0°-40°	928.2	50.0
0°-60°	1540.7	83.0
0°-90°	1855.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1855.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	651	651	651	651	651	
5°	754	716	650	592	578	75
15°	927	832	623	492	466	266
25°	1146	877	571	417	397	523
35°	905	923	495	355	343	561
45°	454	810	390	294	285	358
55°	278	502	275	224	231	251
65°	172	268	171	150	179	169
75°	81	119	82	79	109	87
85°	15	23	16	18	29	20
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°	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2
2.5°	697.1	694.2	693.4	693.7	692.1	690.8	687.6	683.4	680.5	676.8	675.7
5°	753.6	746.5	747.8	745.7	742.3	737.8	733.8	727.5	721.4	715.6	707.9
7.5°	809.1	807.7	804.1	803.5	798.0	790.3	782.4	773.7	760.7	751.8	741.5
10°	852.4	855.0	849.7	850.0	840.2	832.6	825.7	814.3	799.8	787.7	772.6
12.5°	887.2	888.3	887.5	884.1	877.7	864.8	858.2	846.3	830.5	813.8	802.2
15°	926.8	923.9	919.4	915.2	906.0	896.7	883.0	869.0	848.9	832.3	815.4
17.5°	966.4	965.9	960.4	951.4	939.8	927.6	907.0	889.1	867.7	845.8	824.6
20°	1020.8	1017.9	1009.7	999.5	978.1	960.9	935.3	910.7	882.7	855.3	830.7
22.5°	1089.0	1079.5	1071.3	1055.4	1030.9	1001.0	972.3	936.6	897.5	865.3	834.7
25°	1146.5	1142.3	1133.6	1115.9	1087.9	1052.0	1009.2	968.8	919.7	876.9	837.1
27.5°	1181.4	1179.5	1174.3	1157.6	1134.4	1098.7	1053.1	1001.6	945.8	888.0	840.2
30°	1156.6	1156.8	1159.7	1157.9	1147.6	1124.6	1083.9	1032.2	967.8	901.2	841.0
32.5°	1049.9	1057.0	1079.7	1090.6	1105.1	1109.8	1091.6	1048.6	986.2	914.4	843.7
35°	904.7	922.1	937.4	969.1	1006.8	1037.7	1055.7	1041.7	993.9	923.4	845.0
37.5°	767.9	766.6	790.3	824.6	864.8	917.3	968.3	996.3	980.7	921.6	842.6
40°	625.8	638.0	652.7	683.1	730.1	794.8	855.5	915.5	937.1	905.2	833.4
42.5°	528.6	534.2	549.0	572.7	606.5	672.6	732.5	809.6	865.0	868.7	813.0
45°	454.2	460.2	464.5	488.0	519.4	563.8	625.3	702.9	777.4	809.6	780.0
47.5°	394.5	397.9	407.2	421.4	442.0	481.4	530.5	601.0	682.1	744.6	734.6
50°	349.6	352.3	359.6	367.6	384.5	413.5	453.1	510.9	588.8	657.2	679.7
52.5°	310.0	313.4	317.1	324.8	340.4	359.9	392.1	437.3	509.6	579.6	615.3
55°	277.8	279.1	283.1	288.9	300.8	315.5	341.2	382.1	432.8	502.5	551.6
57.5°	249.8	248.5	252.7	256.7	264.6	277.0	295.5	325.8	374.2	433.6	484.8
60°	219.7	221.0	224.2	227.4	232.9	243.7	258.2	282.5	317.9	371.3	423.5
62.5°	193.8	194.9	195.7	200.2	205.2	212.8	224.7	244.5	273.8	317.9	364.7
65°	172.2	170.3	171.4	174.5	178.5	184.8	195.9	210.5	232.4	268.3	307.1
67.5°	146.8	147.3	147.6	149.5	152.9	159.0	166.9	178.8	196.7	225.0	259.0
70°	125.2	125.4	125.7	127.3	130.2	133.6	139.2	148.4	163.7	185.6	212.3
72.5°	103.0	104.0	104.0	105.4	107.5	109.3	114.6	122.3	133.9	151.3	173.7
75°	80.8	82.6	83.2	84.8	86.6	87.1	91.1	97.2	104.6	118.8	136.5
77.5°	62.8	62.8	63.9	65.7	65.7	67.3	71.6	74.2	80.0	89.8	103.2
80°	44.4	45.2	45.2	45.7	46.7	48.1	49.9	52.3	57.3	64.4	71.6
82.5°	29.0	29.3	29.6	30.9	30.4	31.7	32.5	35.4	37.8	41.2	45.7
85°	15.3	15.3	15.6	16.4	17.2	17.4	18.0	19.3	21.1	22.7	25.3
87.5°	6.3	6.1	6.1	6.6	6.6	6.9	7.1	7.7	8.7	8.7	9.8
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°	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2
2.5°	674.9	672.8	669.1	665.9	662.0	659.1	656.2	652.5	648.8	644.8	640.6
5°	701.9	695.5	688.4	681.3	672.8	665.9	658.6	650.1	643.0	635.1	626.6
7.5°	732.8	721.7	709.3	695.3	682.1	670.2	658.0	646.4	635.8	624.0	612.3
10°	762.6	743.3	727.7	708.7	690.0	672.6	655.9	640.6	625.3	610.5	596.2
12.5°	782.9	761.0	741.5	719.6	697.6	675.7	653.8	632.7	614.5	596.5	581.5
15°	796.9	781.6	755.7	729.3	700.5	672.0	647.2	622.6	601.0	580.1	562.2
17.5°	805.6	785.8	760.5	732.8	701.1	671.2	641.4	612.1	587.3	564.8	544.5
20°	808.0	784.8	758.4	729.6	697.9	665.2	631.6	599.7	572.7	547.1	526.5
22.5°	805.6	778.7	750.4	722.5	689.2	655.9	620.8	585.9	555.0	528.6	507.0
25°	801.7	769.2	739.6	706.6	675.7	644.0	607.9	570.9	538.7	511.2	486.9
27.5°	796.7	759.4	723.0	690.5	657.0	625.8	592.5	554.8	521.2	491.1	468.4
30°	790.8	746.5	706.1	667.5	635.8	604.7	572.2	536.6	502.8	474.0	449.4
32.5°	784.2	732.8	685.2	643.8	610.0	581.2	550.8	516.8	483.5	452.6	431.2
35°	775.0	714.0	662.8	617.9	582.8	551.6	524.9	495.1	462.1	433.3	411.1
37.5°	764.2	697.4	640.1	591.5	553.2	521.2	496.7	472.4	441.5	413.8	392.4
40°	749.7	677.3	616.0	563.5	522.6	491.1	467.1	446.3	420.6	392.7	373.4
42.5°	730.6	655.1	588.8	532.9	493.3	459.7	437.3	418.3	396.3	372.1	353.0
45°	709.0	629.8	558.5	503.6	460.5	428.6	406.6	389.5	372.8	351.2	333.5
47.5°	675.2	599.9	531.0	470.3	428.0	397.1	376.5	360.2	347.8	330.6	313.2
50°	635.1	566.1	498.5	437.5	394.8	364.9	345.4	331.1	320.6	307.4	294.2
52.5°	591.0	528.1	462.9	405.9	363.1	334.8	314.2	301.6	294.7	284.1	273.8
55°	539.5	485.3	424.6	372.6	330.6	301.8	284.1	275.1	267.5	262.2	253.0
57.5°	487.7	442.0	387.9	336.4	297.9	272.2	256.4	246.4	240.8	237.1	230.5
60°	431.2	395.3	345.6	301.0	266.7	242.4	228.4	220.2	215.2	213.1	208.6
62.5°	377.3	349.9	304.7	267.5	236.9	215.5	201.5	194.9	191.7	189.3	186.7
65°	324.3	302.6	267.0	232.1	206.2	187.0	175.9	170.6	168.2	165.6	165.3
67.5°	276.5	256.7	228.1	199.6	178.0	161.6	151.8	146.6	143.9	144.2	142.9
70°	229.5	214.1	190.9	167.7	149.2	136.3	127.0	123.6	122.5	122.3	121.2
72.5°	185.6	176.9	156.6	137.0	122.5	112.5	105.1	102.2	100.9	100.3	100.3
75°	147.1	140.7	123.3	108.5	97.4	89.3	84.2	82.1	80.3	81.3	80.5
77.5°	110.4	105.1	93.2	82.6	74.2	67.3	65.0	63.1	62.1	61.8	62.8
80°	77.6	74.5	67.1	58.6	52.3	48.3	46.7	45.2	44.4	43.8	44.4
82.5°	49.9	48.1	42.8	37.8	34.1	32.0	30.4	29.6	28.3	28.5	29.0
85°	27.2	26.7	23.2	21.7	18.2	18.0	16.9	16.1	16.4	15.8	16.6
87.5°	11.1	10.6	9.8	9.0	7.9	7.1	6.6	7.1	6.3	7.1	6.9
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2
2.5°	638.5	635.6	632.1	629.0	624.2	621.1	619.5	620.0	618.2	617.6	617.4
5°	621.6	615.0	608.6	603.4	597.8	591.5	587.0	585.7	585.1	583.8	580.9
7.5°	604.2	595.7	587.5	579.9	571.9	564.6	560.1	556.4	554.3	550.6	549.8
10°	585.7	575.4	566.7	555.6	546.1	538.4	532.6	529.4	527.6	524.2	521.2
12.5°	568.0	557.2	543.7	533.7	523.6	515.7	509.1	503.8	502.5	498.0	495.6
15°	549.0	535.8	523.6	512.0	502.5	492.5	488.5	483.8	479.0	475.0	474.2
17.5°	530.8	514.9	503.0	491.7	480.1	472.7	467.4	464.2	460.5	458.4	454.7
20°	508.8	495.9	482.7	472.1	462.1	455.8	448.6	445.7	443.1	438.1	436.5
22.5°	490.4	474.8	463.7	453.1	444.1	435.2	430.1	427.2	423.3	420.6	418.5
25°	471.1	458.1	444.1	433.6	425.9	416.9	413.5	409.8	406.4	404.0	401.9
27.5°	452.3	438.1	426.7	416.2	408.2	401.9	397.1	393.2	390.8	389.0	387.6
30°	432.8	419.6	409.0	399.3	390.3	385.0	380.5	378.9	376.3	375.0	372.8
32.5°	415.1	401.6	391.6	383.1	375.2	369.9	367.3	364.9	362.3	359.9	359.6
35°	395.0	383.4	374.2	364.9	359.1	354.9	352.0	349.6	347.5	345.6	344.6
37.5°	377.3	366.2	355.9	349.3	343.0	339.3	336.1	335.4	333.2	333.5	331.9
40°	358.3	348.3	339.6	333.0	328.7	324.8	322.7	320.0	318.7	319.0	317.7
42.5°	339.8	330.6	322.7	316.6	312.1	309.2	307.4	305.2	303.7	302.6	302.3
45°	321.1	312.9	306.3	300.2	296.5	293.9	291.5	288.9	287.6	287.0	286.8
47.5°	302.6	295.2	288.1	283.9	280.4	278.1	275.7	273.6	272.5	271.7	270.4
50°	283.6	276.2	271.2	265.9	263.0	259.8	257.2	256.1	254.8	254.5	255.9
52.5°	263.8	258.0	253.5	249.3	245.8	242.4	239.8	238.4	239.2	239.2	240.8
55°	245.0	239.0	234.7	231.3	227.6	224.4	221.8	221.8	221.8	223.4	225.5
57.5°	224.2	218.9	215.7	211.8	208.3	206.2	204.4	204.1	205.2	207.8	210.2
60°	203.1	199.4	195.9	192.8	189.3	187.7	187.5	187.0	188.5	191.2	196.2
62.5°	182.2	179.8	175.6	174.0	171.1	169.3	169.3	169.8	172.2	176.4	180.9
65°	162.1	158.7	155.5	153.9	152.1	150.5	150.5	152.6	156.1	160.0	165.6
67.5°	141.5	138.6	136.5	134.9	132.8	132.0	132.8	135.2	139.4	143.4	149.2
70°	119.4	118.8	117.0	114.9	113.8	113.8	114.6	117.2	120.4	126.5	131.5
72.5°	99.0	99.0	98.0	96.6	95.9	96.6	97.2	99.8	103.8	109.1	114.6
75°	80.5	79.7	79.0	78.4	78.2	78.7	79.5	81.6	86.3	91.4	95.9
77.5°	62.3	61.8	61.0	61.5	61.5	61.8	64.2	66.5	69.2	73.1	77.9
80°	44.9	45.2	44.4	44.1	45.4	45.9	47.8	49.6	51.5	56.0	59.4
82.5°	29.6	30.1	29.8	30.4	30.9	30.9	33.0	34.9	36.4	39.6	42.2
85°	16.9	17.2	17.2	18.0	18.5	18.2	20.1	21.1	21.9	24.3	25.9
87.5°	7.4	7.7	7.9	7.9	7.9	9.0	9.2	9.8	10.0	10.6	11.4
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°	651.2	651.2	651.2	651.2
2.5°	615.0	614.7	616.0	616.8
5°	579.1	578.3	577.2	577.8
7.5°	547.1	545.0	544.5	544.5
10°	518.9	516.8	516.2	515.4
12.5°	494.8	491.7	490.4	489.0
15°	472.1	471.6	468.7	465.8
17.5°	451.3	452.1	449.2	447.8
20°	433.8	431.5	430.4	429.9
22.5°	416.2	414.3	414.3	412.5
25°	400.3	398.7	399.0	397.1
27.5°	385.5	385.3	385.0	384.5
30°	371.8	370.7	369.7	370.2
32.5°	358.6	357.0	356.2	355.9
35°	344.9	344.3	343.3	342.7
37.5°	331.4	331.7	330.3	330.1
40°	316.9	316.6	316.3	315.8
42.5°	301.6	300.8	301.3	301.0
45°	286.2	285.4	286.0	285.2
47.5°	271.2	271.7	271.7	272.0
50°	256.4	257.5	257.5	258.2
52.5°	242.7	244.8	244.8	244.5
55°	227.9	230.3	231.0	231.3
57.5°	213.9	216.3	218.6	219.2
60°	198.8	203.1	205.4	206.0
62.5°	185.4	189.3	192.5	192.8
65°	170.3	175.1	178.0	179.0
67.5°	155.0	158.7	162.7	164.2
70°	137.6	142.1	144.7	145.8
72.5°	119.4	124.4	127.8	128.3
75°	101.9	105.6	108.3	108.8
77.5°	82.1	85.8	88.2	88.7
80°	62.3	65.5	67.1	68.1
82.5°	44.1	46.2	47.0	48.1
85°	27.2	28.8	29.0	29.0
87.5°	11.9	12.1	12.1	12.7
90°	0.0	0.0	0.0	0.0

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