

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: P243665

Luminaire Tested: **S125DR-H375D830-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243665
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-H375D830-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1386.5 lumens
Efficiency: N/A
Efficacy: 123.8 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

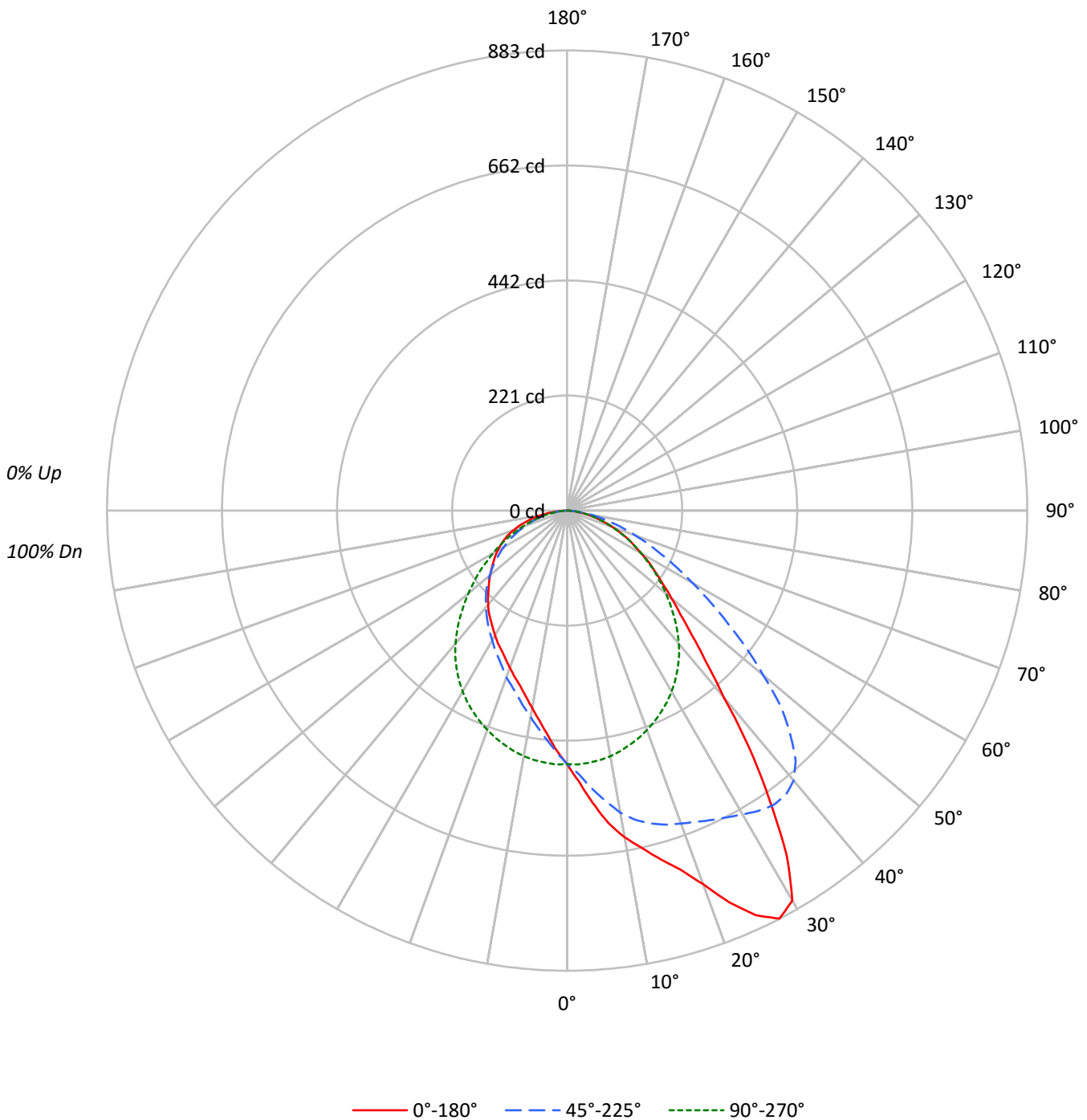
Input Watts (W): 11.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3458	3458	3458
5°	4017	3465	3080
10°	4596	3454	2779
15°	5095	3423	2561
20°	5769	3388	2429
25°	6718	3345	2327
30°	7092	3290	2270
35°	5864	3209	2222
40°	4338	3093	2189
45°	3410	2925	2142
50°	2888	2736	2133
55°	2571	2548	2141
60°	2333	2338	2188
65°	2163	2143	2250
70°	1943	1918	2263
75°	1659	1686	2233
80°	1355	1379	2083
85°	930	979	1770



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.0	3.4
10°-20°	140.4	10.1
20°-30°	228.3	16.5
30°-40°	277.8	20.0
40°-50°	254.2	18.3
50°-60°	203.4	14.7
60°-70°	141.7	10.2
70°-80°	75.3	5.4
80°-90°	18.5	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°	415.7	30.0
0°-40°	693.5	50.0
0°-60°	1151.1	83.0
0°-90°	1386.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1386.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	486	486	486	486	486	
5°	563	535	486	442	432	56
15°	692	622	465	368	348	199
25°	857	655	426	312	297	391
35°	676	690	370	265	256	419
45°	339	605	291	220	213	268
55°	208	375	206	168	173	187
65°	129	200	127	112	134	127
75°	60	89	61	59	81	65
85°	11	17	12	14	22	15
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°	486.5	486.5	486.5	486.5	486.5	486.5	486.5	486.5	486.5	486.5	486.5
2.5°	520.8	518.7	518.1	518.3	517.1	516.1	513.7	510.6	508.4	505.6	504.8
5°	563.0	557.7	558.7	557.1	554.6	551.2	548.2	543.5	539.0	534.6	528.9
7.5°	604.5	603.5	600.7	600.3	596.2	590.5	584.5	578.0	568.4	561.7	554.0
10°	636.8	638.8	634.9	635.0	627.7	622.0	616.9	608.4	597.6	588.5	577.2
12.5°	662.9	663.7	663.1	660.5	655.8	646.1	641.2	632.3	620.4	608.0	599.3
15°	692.5	690.3	686.9	683.8	676.9	670.0	659.7	649.3	634.3	621.8	609.2
17.5°	722.0	721.7	717.5	710.8	702.1	693.0	677.7	664.2	648.3	631.9	616.1
20°	762.7	760.5	754.4	746.7	730.7	717.9	698.8	680.4	659.5	639.0	620.6
22.5°	813.6	806.5	800.4	788.5	770.2	747.9	726.4	699.8	670.6	646.5	623.6
25°	856.6	853.4	846.9	833.7	812.8	786.0	754.0	723.8	687.1	655.2	625.4
27.5°	882.6	881.3	877.3	864.9	847.5	820.9	786.8	748.3	706.7	663.5	627.7
30°	864.1	864.3	866.5	865.1	857.4	840.2	809.8	771.2	723.0	673.3	628.3
32.5°	784.4	789.7	806.7	814.8	825.6	829.2	815.6	783.4	736.8	683.2	630.3
35°	675.9	688.9	700.3	724.0	752.2	775.3	788.7	778.3	742.6	689.9	631.3
37.5°	573.7	572.7	590.5	616.1	646.1	685.4	723.4	744.3	732.7	688.5	629.5
40°	467.6	476.6	487.7	510.4	545.5	593.8	639.2	684.0	700.2	676.3	622.6
42.5°	395.0	399.1	410.1	427.9	453.2	502.5	547.3	604.9	646.3	649.1	607.4
45°	339.3	343.9	347.0	364.6	388.1	421.2	467.2	525.2	580.8	604.9	582.8
47.5°	294.7	297.3	304.2	314.9	330.2	359.6	396.3	449.0	509.6	556.3	548.8
50°	261.2	263.2	268.7	274.6	287.2	308.9	338.5	381.7	439.9	491.0	507.8
52.5°	231.6	234.2	236.9	242.7	254.3	268.9	293.0	326.7	380.8	433.0	459.7
55°	207.5	208.5	211.5	215.8	224.7	235.8	254.9	285.5	323.3	375.4	412.1
57.5°	186.6	185.6	188.8	191.8	197.7	206.9	220.8	243.4	279.5	323.9	362.2
60°	164.1	165.1	167.5	169.9	174.0	182.1	192.9	211.1	237.5	277.4	316.4
62.5°	144.8	145.6	146.2	149.5	153.3	159.0	167.9	182.7	204.6	237.5	272.4
65°	128.6	127.2	128.0	130.4	133.4	138.1	146.4	157.2	173.6	200.4	229.4
67.5°	109.7	110.1	110.3	111.7	114.2	118.8	124.7	133.6	147.0	168.1	193.5
70°	93.5	93.7	93.9	95.1	97.3	99.8	104.0	110.9	122.3	138.7	158.6
72.5°	76.9	77.7	77.7	78.7	80.3	81.7	85.6	91.3	100.0	113.0	129.8
75°	60.4	61.7	62.1	63.3	64.7	65.1	68.1	72.6	78.1	88.8	102.0
77.5°	47.0	47.0	47.7	49.1	49.1	50.3	53.5	55.4	59.8	67.1	77.1
80°	33.1	33.7	33.7	34.1	34.9	35.9	37.3	39.1	42.8	48.1	53.5
82.5°	21.7	21.9	22.1	23.1	22.7	23.7	24.3	26.4	28.2	30.8	34.1
85°	11.4	11.4	11.6	12.2	12.8	13.0	13.4	14.4	15.8	17.0	18.9
87.5°	4.7	4.5	4.5	4.9	4.9	5.1	5.3	5.7	6.5	6.5	7.3
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°	486.5	486.5	486.5	486.5	486.5	486.5	486.5	486.5	486.5	486.5	486.5
2.5°	504.3	502.7	499.9	497.5	494.6	492.4	490.2	487.5	484.7	481.8	478.6
5°	524.4	519.6	514.3	509.0	502.7	497.5	492.0	485.7	480.4	474.5	468.1
7.5°	547.5	539.2	529.9	519.4	509.6	500.7	491.6	482.9	475.1	466.2	457.5
10°	569.7	555.3	543.7	529.5	515.5	502.5	490.0	478.6	467.2	456.1	445.5
12.5°	584.9	568.6	554.0	537.6	521.2	504.8	488.5	472.7	459.1	445.7	434.4
15°	595.4	584.0	564.6	544.9	523.4	502.1	483.5	465.2	449.0	433.4	420.0
17.5°	601.9	587.1	568.2	547.5	523.8	501.5	479.2	457.3	438.8	422.0	406.8
20°	603.7	586.3	566.6	545.1	521.4	497.0	471.9	448.0	427.9	408.8	393.4
22.5°	601.9	581.8	560.7	539.8	514.9	490.0	463.8	437.8	414.7	395.0	378.8
25°	598.9	574.7	552.6	527.9	504.8	481.2	454.1	426.5	402.5	381.9	363.8
27.5°	595.2	567.4	540.2	515.9	490.8	467.6	442.7	414.5	389.4	366.9	350.0
30°	590.9	557.7	527.5	498.7	475.1	451.8	427.5	400.9	375.6	354.1	335.8
32.5°	585.9	547.5	511.9	481.0	455.7	434.2	411.5	386.1	361.2	338.1	322.2
35°	579.0	533.4	495.2	461.6	435.4	412.1	392.2	369.9	345.2	323.7	307.2
37.5°	570.9	521.0	478.2	441.9	413.3	389.4	371.1	352.9	329.9	309.1	293.2
40°	560.1	506.0	460.3	421.0	390.4	366.9	349.0	333.4	314.3	293.4	279.0
42.5°	545.9	489.5	439.9	398.1	368.5	343.5	326.7	312.5	296.1	278.0	263.8
45°	529.7	470.5	417.2	376.2	344.1	320.2	303.8	291.0	278.6	262.4	249.2
47.5°	504.4	448.2	396.7	351.4	319.8	296.7	281.3	269.1	259.8	247.0	234.0
50°	474.5	423.0	372.5	326.9	294.9	272.6	258.0	247.4	239.5	229.6	219.8
52.5°	441.5	394.6	345.8	303.2	271.3	250.2	234.8	225.3	220.2	212.3	204.6
55°	403.0	362.6	317.2	278.4	247.0	225.5	212.3	205.6	199.8	195.9	189.0
57.5°	364.4	330.2	289.8	251.3	222.5	203.4	191.6	184.1	179.9	177.2	172.2
60°	322.2	295.3	258.2	224.9	199.3	181.1	170.6	164.5	160.8	159.2	155.9
62.5°	281.9	261.4	227.7	199.8	177.0	161.0	150.5	145.6	143.2	141.5	139.5
65°	242.3	226.1	199.5	173.4	154.1	139.7	131.4	127.4	125.7	123.7	123.5
67.5°	206.6	191.8	170.5	149.1	133.0	120.7	113.4	109.5	107.5	107.7	106.7
70°	171.4	160.0	142.6	125.3	111.5	101.8	94.9	92.3	91.5	91.3	90.6
72.5°	138.7	132.2	117.0	102.4	91.5	84.0	78.5	76.3	75.4	75.0	75.0
75°	109.9	105.2	92.1	81.1	72.8	66.7	62.9	61.4	60.0	60.8	60.2
77.5°	82.5	78.5	69.6	61.7	55.4	50.3	48.5	47.2	46.4	46.2	47.0
80°	58.0	55.6	50.1	43.8	39.1	36.1	34.9	33.7	33.1	32.7	33.1
82.5°	37.3	35.9	32.0	28.2	25.4	23.9	22.7	22.1	21.1	21.3	21.7
85°	20.3	19.9	17.4	16.2	13.6	13.4	12.6	12.0	12.2	11.8	12.4
87.5°	8.3	7.9	7.3	6.7	5.9	5.3	4.9	5.3	4.7	5.3	5.1
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°	486.5	486.5	486.5	486.5	486.5	486.5	486.5	486.5	486.5	486.5	486.5
2.5°	477.0	474.9	472.3	469.9	466.4	464.0	462.8	463.2	461.8	461.4	461.2
5°	464.4	459.5	454.7	450.8	446.6	441.9	438.6	437.6	437.2	436.2	434.0
7.5°	451.4	445.1	439.0	433.2	427.3	421.8	418.4	415.7	414.1	411.3	410.7
10°	437.6	429.9	423.4	415.1	408.0	402.3	397.9	395.5	394.2	391.6	389.4
12.5°	424.4	416.3	406.2	398.7	391.2	385.3	380.4	376.4	375.4	372.1	370.3
15°	410.1	400.3	391.2	382.5	375.4	367.9	365.0	361.4	357.9	354.9	354.3
17.5°	396.5	384.7	375.8	367.3	358.7	353.1	349.2	346.8	344.1	342.5	339.7
20°	380.2	370.5	360.6	352.7	345.2	340.5	335.2	333.0	331.0	327.3	326.1
22.5°	366.4	354.7	346.4	338.5	331.8	325.1	321.4	319.2	316.2	314.3	312.7
25°	351.9	342.3	331.8	323.9	318.2	311.5	308.9	306.2	303.6	301.8	300.3
27.5°	337.9	327.3	318.8	310.9	305.0	300.3	296.7	293.8	292.0	290.6	289.6
30°	323.3	313.5	305.6	298.3	291.6	287.6	284.3	283.1	281.1	280.1	278.6
32.5°	310.1	300.1	292.6	286.3	280.3	276.4	274.4	272.6	270.7	268.9	268.7
35°	295.1	286.5	279.5	272.6	268.3	265.1	263.0	261.2	259.6	258.2	257.5
37.5°	281.9	273.6	265.9	261.0	256.3	253.5	251.1	250.5	249.0	249.2	248.0
40°	267.7	260.2	253.7	248.8	245.6	242.7	241.1	239.1	238.1	238.3	237.3
42.5°	253.9	247.0	241.1	236.5	233.2	231.0	229.6	228.1	226.9	226.1	225.9
45°	239.9	233.8	228.8	224.3	221.5	219.6	217.8	215.8	214.8	214.4	214.2
47.5°	226.1	220.6	215.2	212.1	209.5	207.7	206.0	204.4	203.6	203.0	202.0
50°	211.9	206.4	202.6	198.7	196.5	194.1	192.2	191.4	190.4	190.2	191.2
52.5°	197.1	192.7	189.4	186.2	183.7	181.1	179.1	178.1	178.7	178.7	179.9
55°	183.1	178.5	175.4	172.8	170.1	167.7	165.7	165.7	165.7	166.9	168.5
57.5°	167.5	163.5	161.2	158.2	155.7	154.1	152.7	152.5	153.3	155.3	157.0
60°	151.7	148.9	146.4	144.0	141.5	140.3	140.1	139.7	140.9	142.8	146.6
62.5°	136.1	134.3	131.2	130.0	127.8	126.5	126.5	126.9	128.6	131.8	135.1
65°	121.1	118.6	116.2	115.0	113.6	112.5	112.5	114.0	116.6	119.6	123.7
67.5°	105.7	103.6	102.0	100.8	99.2	98.6	99.2	101.0	104.2	107.1	111.5
70°	89.2	88.8	87.4	85.8	85.0	85.0	85.6	87.6	90.0	94.5	98.2
72.5°	74.0	74.0	73.2	72.2	71.6	72.2	72.6	74.6	77.5	81.5	85.6
75°	60.2	59.6	59.0	58.6	58.4	58.8	59.4	61.0	64.5	68.3	71.6
77.5°	46.6	46.2	45.6	46.0	46.0	46.2	47.9	49.7	51.7	54.6	58.2
80°	33.5	33.7	33.1	32.9	33.9	34.3	35.7	37.1	38.5	41.8	44.4
82.5°	22.1	22.5	22.3	22.7	23.1	23.1	24.7	26.0	27.2	29.6	31.6
85°	12.6	12.8	12.8	13.4	13.8	13.6	15.0	15.8	16.4	18.1	19.3
87.5°	5.5	5.7	5.9	5.9	5.9	6.7	6.9	7.3	7.5	7.9	8.5
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°	486.5	486.5	486.5	486.5
2.5°	459.5	459.3	460.3	460.8
5°	432.6	432.0	431.3	431.7
7.5°	408.8	407.2	406.8	406.8
10°	387.7	386.1	385.7	385.1
12.5°	369.7	367.3	366.4	365.4
15°	352.7	352.3	350.2	348.0
17.5°	337.2	337.7	335.6	334.6
20°	324.1	322.4	321.6	321.2
22.5°	310.9	309.5	309.5	308.2
25°	299.1	297.9	298.1	296.7
27.5°	288.0	287.8	287.6	287.2
30°	277.8	277.0	276.2	276.6
32.5°	267.9	266.7	266.1	265.9
35°	257.6	257.3	256.5	256.1
37.5°	247.6	247.8	246.8	246.6
40°	236.7	236.5	236.3	235.9
42.5°	225.3	224.7	225.1	224.9
45°	213.9	213.3	213.7	213.1
47.5°	202.6	203.0	203.0	203.2
50°	191.6	192.3	192.3	192.9
52.5°	181.3	182.9	182.9	182.7
55°	170.3	172.0	172.6	172.8
57.5°	159.8	161.6	163.3	163.7
60°	148.6	151.7	153.5	153.9
62.5°	138.5	141.5	143.8	144.0
65°	127.2	130.8	133.0	133.8
67.5°	115.8	118.6	121.5	122.7
70°	102.8	106.1	108.1	108.9
72.5°	89.2	92.9	95.5	95.9
75°	76.2	78.9	80.9	81.3
77.5°	61.4	64.1	65.9	66.3
80°	46.6	48.9	50.1	50.9
82.5°	32.9	34.5	35.1	35.9
85°	20.3	21.5	21.7	21.7
87.5°	8.9	9.1	9.1	9.5
90°	0.0	0.0	0.0	0.0

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