

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: P242815

Luminaire Tested: **S125DR-S375D840-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242815  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-22)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DR-S375D840-X4F0-XX-UDD-A-W  
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1465.7 lumens  
Efficiency: N/A  
Efficacy: 126.4 lumens/watt  
Spacing Criteria (0/90/45): 1.43 / 1.23 / 1.53  
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')  
CIE Type: Direct

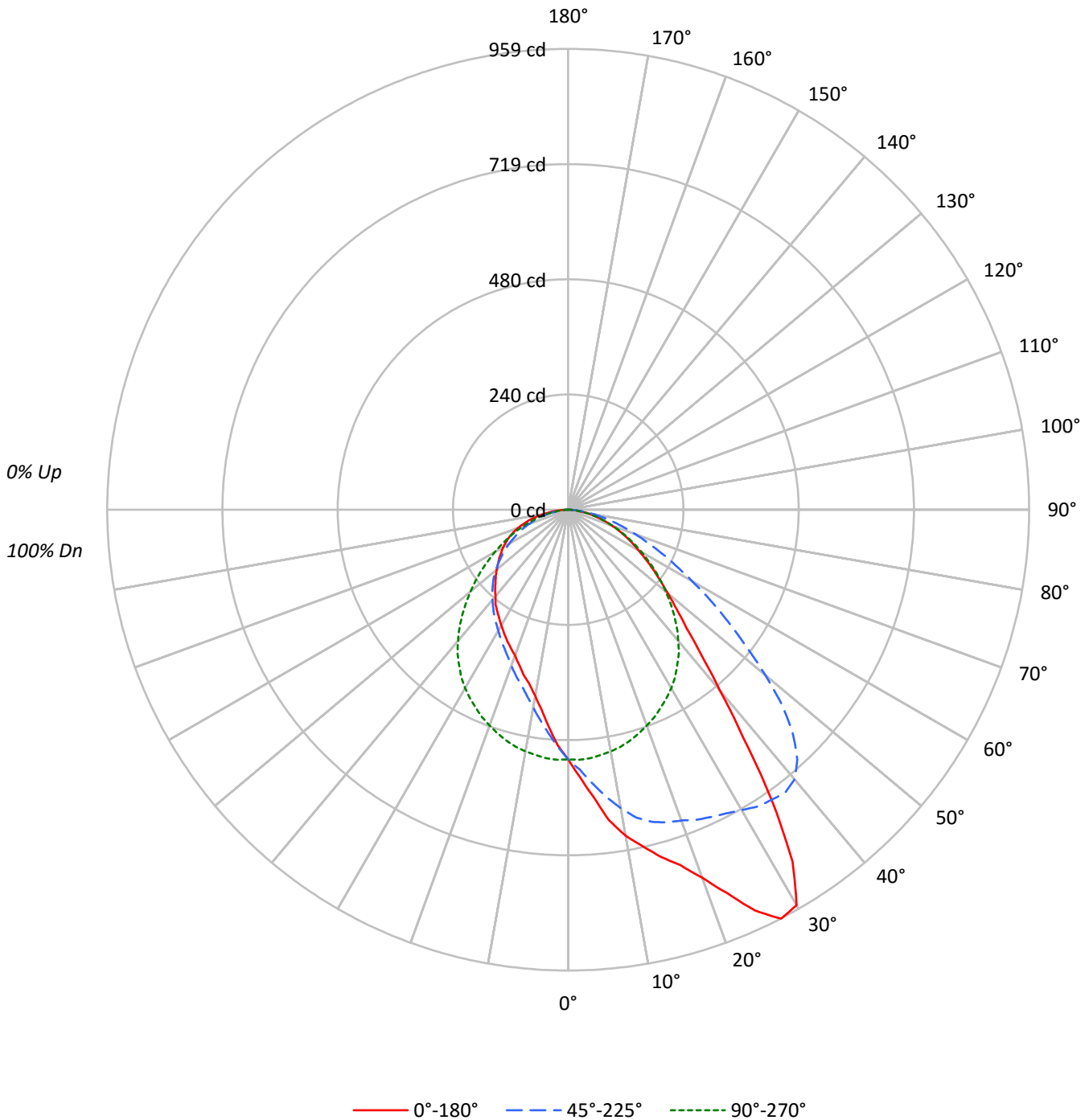
Input Watts (W): 11.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	98	90	84	79	87	82	78		84	80	76		81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66		74	69	65		72	67	64	61
4	84	73	64	58	82	71	63	57	69	62	57		67	61	56		64	59	55	53
5	78	65	56	50	76	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	41
7	67	53	45	39	65	53	45	39	51	44	39		50	43	38		48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34		46	39	34		44	39	34	32
9	58	45	37	31	57	44	37	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°	3692	3692	3692
5°	4275	3704	3243
10°	4973	3685	2841
15°	5505	3658	2622
20°	6163	3615	2445
25°	7219	3567	2358
30°	7798	3519	2283
35°	6412	3430	2234
40°	4557	3306	2180
45°	3501	3138	2149
50°	2989	2930	2145
55°	2660	2726	2164
60°	2401	2503	2219
65°	2217	2280	2277
70°	2016	2047	2309
75°	1779	1804	2287
80°	1498	1469	2092
85°	1191	1060	1688



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.0	3.4
10°-20°	148.9	10.2
20°-30°	241.9	16.5
30°-40°	295.6	20.2
40°-50°	268.2	18.3
50°-60°	213.6	14.6
60°-70°	148.8	10.1
70°-80°	79.2	5.4
80°-90°	19.7	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°	440.8	30.1
0°-40°	736.3	50.2
0°-60°	1218.1	83.1
0°-90°	1465.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1465.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	519	519	519	519	519	
5°	599	571	519	467	455	60
15°	748	673	497	377	356	214
25°	921	705	455	316	301	422
35°	739	737	395	268	258	453
45°	348	662	312	222	214	277
55°	215	405	220	169	175	193
65°	132	215	136	114	135	131
75°	65	96	66	60	83	70
85°	15	19	13	14	21	17
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°	519.4	519.4	519.4	519.4	519.4	519.4	519.4	519.4	519.4	519.4	519.4
2.5°	556.9	556.0	555.1	553.3	554.7	550.9	549.2	546.1	542.3	541.0	539.5
5°	599.2	600.3	601.4	596.8	597.2	594.1	587.1	581.3	576.7	570.8	566.6
7.5°	651.7	648.4	648.6	645.7	640.6	636.5	629.6	620.1	611.5	601.8	593.5
10°	689.1	689.4	687.4	683.9	678.3	674.4	664.7	655.4	644.2	630.9	621.5
12.5°	717.4	718.5	715.8	710.7	708.8	698.6	691.6	680.1	666.2	656.3	640.6
15°	748.2	745.8	744.0	738.1	733.5	724.2	712.1	700.6	686.1	672.6	659.2
17.5°	775.6	777.5	774.7	770.3	756.6	745.8	730.8	716.3	698.8	682.1	666.4
20°	814.8	816.6	811.5	802.0	784.8	774.0	752.6	732.4	711.4	688.3	670.6
22.5°	863.7	861.5	854.3	838.6	824.3	802.0	778.4	752.6	725.1	698.2	673.3
25°	920.6	911.4	907.2	889.3	869.7	840.4	808.6	772.5	739.8	705.2	675.3
27.5°	959.4	955.7	949.7	935.2	912.7	879.4	841.9	798.7	754.8	712.5	674.8
30°	950.2	950.6	951.0	947.1	933.8	910.3	873.0	825.6	770.9	721.8	676.4
32.5°	868.2	878.1	887.6	899.9	907.8	908.1	888.2	846.5	789.9	732.4	675.5
35°	739.0	741.4	766.3	791.0	824.5	850.5	867.9	849.0	801.6	737.4	674.8
37.5°	597.4	609.6	628.3	656.1	706.3	747.3	801.1	819.7	797.4	741.6	674.6
40°	491.2	502.2	513.4	541.9	582.7	635.1	698.4	752.4	765.0	732.4	668.0
42.5°	409.2	417.3	430.1	449.7	482.1	527.1	586.9	661.6	712.7	705.5	654.1
45°	348.3	353.8	363.5	380.5	405.2	441.6	494.9	572.1	639.3	661.6	630.5
47.5°	305.1	305.3	313.3	325.4	344.1	377.6	417.5	481.0	553.6	604.9	597.7
50°	270.3	269.2	275.1	285.3	299.4	319.9	357.6	405.9	474.9	535.0	551.8
52.5°	240.3	240.7	243.8	250.7	261.9	278.7	304.4	346.8	403.2	465.4	500.7
55°	214.7	213.8	218.0	223.1	231.7	243.2	263.4	296.7	344.6	405.4	446.4
57.5°	190.0	192.5	194.2	197.7	205.2	213.2	231.3	256.8	296.3	350.3	393.7
60°	168.9	171.3	172.6	176.1	181.9	188.5	201.7	221.6	253.5	298.5	341.5
62.5°	149.9	151.7	151.9	155.0	159.4	165.8	175.5	191.4	214.9	252.9	294.7
65°	131.8	131.8	132.7	136.0	138.2	144.0	151.9	164.0	184.3	214.9	250.9
67.5°	114.2	115.3	115.1	116.6	118.6	123.5	129.4	139.5	155.6	178.8	208.6
70°	97.0	97.9	97.7	98.8	101.0	103.8	108.5	117.9	128.7	147.9	172.6
72.5°	81.6	81.8	81.1	82.7	83.8	86.2	91.5	95.5	105.4	120.8	140.0
75°	64.8	65.3	65.7	66.6	67.9	69.2	71.9	76.9	83.6	95.7	108.7
77.5°	51.6	50.5	51.8	51.6	52.2	53.4	55.8	58.6	64.4	72.5	83.3
80°	36.6	36.8	36.8	37.0	38.1	38.8	40.8	42.8	47.0	52.7	59.7
82.5°	24.3	24.9	24.5	24.9	25.8	26.2	27.1	28.7	30.6	34.8	39.5
85°	14.6	13.4	13.9	14.3	14.3	14.6	15.4	16.1	17.4	19.2	21.2
87.5°	5.3	5.7	6.0	6.0	6.2	6.2	7.1	7.1	7.7	8.4	9.3
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°	519.4	519.4	519.4	519.4	519.4	519.4	519.4	519.4	519.4	519.4	519.4
2.5°	538.1	536.6	534.8	531.7	528.0	526.0	522.9	520.9	517.0	513.7	510.1
5°	561.5	555.8	550.5	543.6	536.1	531.3	525.6	519.2	512.6	505.7	498.2
7.5°	584.9	575.4	565.0	554.2	543.6	533.7	524.5	515.0	506.4	495.6	486.5
10°	608.5	595.7	582.0	565.9	550.3	536.6	522.7	510.6	498.2	485.0	473.3
12.5°	632.0	614.0	593.2	575.2	555.5	538.4	521.4	505.1	488.7	473.8	459.6
15°	640.6	625.7	607.8	582.7	561.5	538.8	517.2	497.1	478.4	462.1	444.9
17.5°	649.0	629.8	610.9	586.6	559.1	534.6	510.1	488.3	467.6	447.1	431.4
20°	651.0	631.2	611.1	587.5	559.1	530.0	505.5	477.9	455.2	433.9	413.6
22.5°	650.3	627.2	604.9	580.5	552.9	526.7	495.8	467.6	442.5	421.5	400.1
25°	645.5	621.5	594.1	569.7	542.3	513.9	483.9	454.8	429.7	405.6	384.7
27.5°	642.6	612.2	582.2	554.0	527.8	501.5	472.4	442.5	414.9	390.4	371.0
30°	636.2	602.1	567.2	537.5	510.4	485.0	457.9	428.8	399.7	375.9	354.7
32.5°	630.5	589.3	552.0	519.0	489.9	465.4	440.9	413.6	385.1	360.9	339.7
35°	622.8	576.7	534.6	498.0	467.4	442.0	421.1	395.3	369.0	345.7	325.4
37.5°	613.7	560.4	515.9	477.7	444.4	418.0	398.1	378.1	351.8	328.9	310.8
40°	602.7	542.8	494.9	455.7	420.8	393.1	375.0	356.3	335.3	314.4	295.0
42.5°	588.8	526.9	473.8	430.8	396.4	369.5	350.3	335.1	317.2	298.1	280.4
45°	571.2	507.0	450.6	405.2	370.4	343.7	324.1	312.2	298.3	279.8	264.5
47.5°	547.8	484.6	426.4	379.4	343.5	318.8	300.0	288.4	278.2	263.7	249.3
50°	514.5	458.8	399.7	353.2	317.2	292.3	275.3	265.0	256.6	246.0	234.3
52.5°	477.3	426.4	373.5	327.6	292.1	267.6	251.1	242.3	235.7	228.8	217.4
55°	437.4	393.3	343.0	299.4	266.5	242.5	228.0	220.0	214.3	208.6	201.5
57.5°	394.4	358.7	312.6	271.8	241.4	218.9	205.2	197.1	192.5	189.4	185.0
60°	348.5	319.0	280.6	244.3	214.7	195.3	182.1	176.1	172.4	170.0	166.9
62.5°	306.0	283.1	248.2	215.8	190.9	172.8	161.4	155.6	152.1	151.2	148.8
65°	264.3	245.6	216.3	188.7	166.7	151.0	141.1	135.6	133.4	132.1	132.3
67.5°	222.4	210.3	185.8	161.6	143.5	129.6	121.5	117.3	116.2	114.2	114.2
70°	184.7	176.1	156.3	135.8	120.1	110.0	103.0	98.5	97.4	96.6	96.3
72.5°	151.5	144.2	127.6	112.2	98.5	89.9	84.4	82.2	80.2	79.8	79.8
75°	118.8	114.6	101.0	88.0	78.3	72.1	68.1	65.7	64.4	64.2	64.4
77.5°	89.7	85.8	76.3	66.6	60.2	55.3	51.6	50.9	49.2	49.4	48.9
80°	63.5	61.1	55.6	48.3	43.2	39.2	37.5	35.9	35.5	34.8	35.5
82.5°	41.7	39.0	35.7	31.7	27.8	25.8	24.0	23.8	23.6	23.4	23.4
85°	22.7	22.9	20.7	17.2	15.4	14.1	13.0	13.0	12.8	12.6	12.8
87.5°	9.7	9.3	8.4	7.7	6.6	6.0	5.7	6.0	5.3	5.1	5.3
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):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	519.4	519.4	519.4	519.4	519.4	519.4	519.4	519.4	519.4	519.4	519.4
2.5°	508.1	505.7	503.7	499.3	496.9	493.6	491.0	493.8	490.7	492.1	490.1
5°	494.5	488.3	483.9	477.5	472.0	466.9	463.2	462.5	460.8	459.9	457.2
7.5°	478.2	471.1	463.8	455.9	449.3	442.2	438.0	434.1	431.7	428.6	426.1
10°	464.1	453.7	444.9	434.7	425.9	418.2	412.0	408.9	406.1	401.9	400.3
12.5°	446.6	435.8	424.6	413.6	405.2	396.4	391.3	386.2	384.5	379.6	379.4
15°	433.4	417.3	406.7	395.7	384.0	377.0	372.6	367.5	365.3	362.0	359.6
17.5°	417.1	402.6	389.3	378.1	367.5	361.8	356.0	352.5	348.8	346.3	342.4
20°	399.0	385.4	372.1	360.0	352.3	345.5	341.0	337.7	333.8	332.7	328.7
22.5°	383.8	368.4	355.8	346.1	337.5	329.6	324.7	322.7	320.3	316.4	316.4
25°	367.1	351.4	340.6	330.5	323.0	315.9	312.6	309.7	307.1	304.7	303.8
27.5°	352.9	339.1	325.8	316.6	310.2	303.6	300.7	297.0	295.0	293.0	290.3
30°	338.0	323.6	312.4	303.6	296.5	290.8	287.7	285.3	283.5	281.7	280.4
32.5°	322.5	309.5	298.7	290.1	283.1	279.1	276.5	274.9	272.9	270.7	269.0
35°	309.3	294.7	284.2	276.7	271.2	267.9	264.8	263.2	261.0	261.0	259.3
37.5°	293.6	280.9	271.4	264.5	259.7	256.6	253.1	252.2	250.7	249.8	249.1
40°	280.0	268.3	259.5	252.6	247.4	244.9	242.3	240.5	239.6	238.5	238.1
42.5°	265.9	254.8	246.5	240.3	235.9	233.9	231.5	230.4	228.4	226.8	226.6
45°	251.5	240.7	233.0	228.0	224.0	221.6	220.0	217.4	216.5	214.7	214.5
47.5°	238.3	227.7	220.0	215.8	212.3	210.5	208.1	205.2	204.1	203.0	202.8
50°	223.1	213.6	206.6	202.6	199.3	196.4	194.0	192.2	191.6	191.6	192.0
52.5°	207.7	200.0	194.2	189.2	186.1	183.0	180.8	179.9	178.8	180.1	181.0
55°	192.7	184.5	180.1	175.5	172.4	168.9	167.8	167.3	166.7	168.4	169.3
57.5°	176.6	171.1	165.8	160.9	158.3	156.1	154.3	154.1	155.4	155.9	158.5
60°	161.4	154.8	150.1	146.6	143.3	142.0	141.5	141.1	142.0	144.4	148.1
62.5°	144.6	139.5	134.5	132.1	129.8	127.4	127.4	127.9	129.8	132.7	136.5
65°	128.3	123.7	120.4	117.3	115.3	114.0	114.4	115.3	117.3	121.0	125.2
67.5°	111.6	108.5	105.4	102.5	100.5	100.7	101.0	102.1	104.5	108.9	112.9
70°	95.5	91.9	89.5	88.4	86.9	86.0	87.3	89.5	91.5	95.5	98.8
72.5°	79.4	76.5	74.7	74.1	73.6	73.0	73.2	75.6	78.5	82.5	86.4
75°	63.5	62.4	61.1	60.2	59.5	60.0	60.4	62.6	64.8	69.0	73.4
77.5°	49.2	47.8	47.0	46.7	46.3	46.5	47.6	49.4	51.6	54.7	58.2
80°	35.1	34.6	34.2	34.0	34.0	34.2	35.9	37.0	39.0	41.9	44.5
82.5°	23.1	22.9	22.9	22.9	23.1	23.1	24.0	25.6	27.1	29.1	31.3
85°	13.4	13.0	13.7	13.9	13.4	14.1	14.6	15.4	16.1	17.2	18.3
87.5°	5.5	6.0	5.7	6.0	6.0	6.4	6.2	7.1	7.5	7.9	7.7
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°	519.4	519.4	519.4	519.4
2.5°	488.7	490.3	489.0	490.7
5°	456.1	454.1	455.5	454.6
7.5°	425.9	424.2	421.5	420.6
10°	397.9	395.5	395.3	393.7
12.5°	377.4	375.2	372.1	371.7
15°	358.2	356.5	354.9	356.3
17.5°	341.9	340.4	339.9	338.6
20°	326.7	325.6	326.1	323.2
22.5°	314.6	312.2	311.7	311.7
25°	301.8	300.7	299.6	300.7
27.5°	290.6	289.5	289.0	289.2
30°	280.4	278.2	278.4	278.2
32.5°	269.4	268.1	267.6	267.2
35°	258.6	258.6	257.5	257.5
37.5°	248.7	248.5	247.8	248.2
40°	237.2	237.0	236.3	235.0
42.5°	226.2	225.3	225.1	224.9
45°	214.5	214.5	214.1	213.8
47.5°	203.0	203.5	204.4	204.1
50°	192.9	193.1	193.8	194.0
52.5°	181.7	183.2	184.1	183.9
55°	171.3	172.8	174.4	174.6
57.5°	160.9	162.9	164.5	164.9
60°	150.4	153.2	155.2	156.1
62.5°	140.2	143.5	145.5	145.5
65°	129.0	132.3	134.0	135.4
67.5°	117.3	120.6	122.4	123.5
70°	104.3	107.6	110.2	111.1
72.5°	91.5	94.4	96.3	97.4
75°	76.3	80.2	82.2	83.3
77.5°	61.7	65.7	66.8	67.5
80°	47.2	49.4	50.9	51.1
82.5°	33.5	35.3	35.5	36.2
85°	19.8	20.7	20.9	20.7
87.5°	8.2	7.9	7.9	8.4
90°	0.0	0.0	0.0	0.0

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