

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO

Report Number: P130046

Luminaire Tested: **HL618TAT - HLM6930 - HL6FL - 70PS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P130046  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33455)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: HL618TAT - HLM6930 - HL6FL - 70PS  
Description: HALO ALLSLOPE 6" 30W, Albalite Glass Lens, White Polymer Trim Ring  
"Dead Front", Wet Location - Showerlight using 40 Degree Optic at a 6-12  
Pitch  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

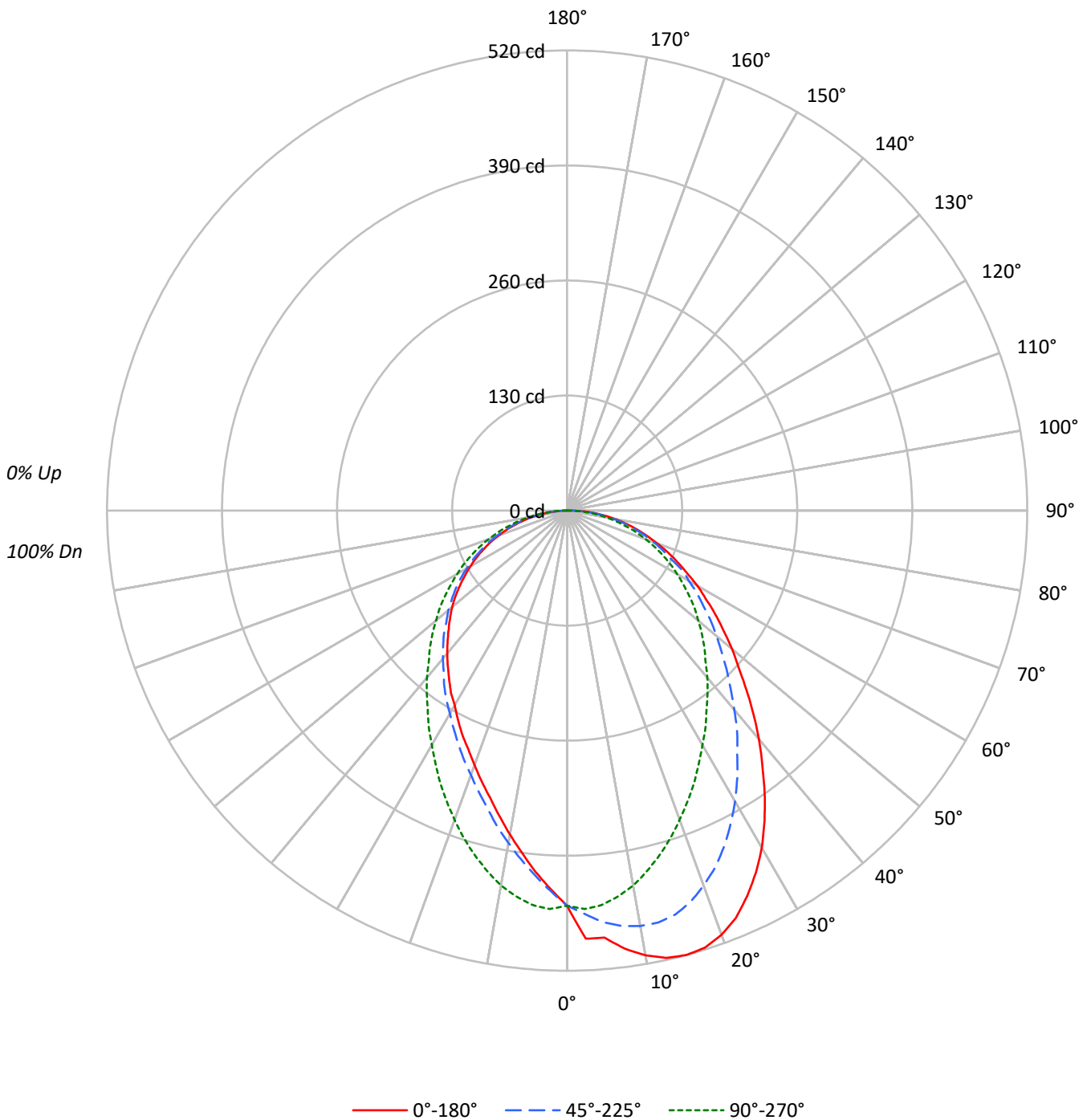
Lumens per Lamp: N/A  
Luminaire Lumens: 1050.1 lumens  
Efficiency: N/A  
Efficacy: 38.0 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.05 / 1.21  
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')  
CIE Type: Direct  
  
Input Watts (W): 27.6  
Input Voltage (V): NR  
Input Current (Ain): 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	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	84
2	99	91	84	78	96	89	83	78	85	80	76	82	78	74	79	76	72	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	53	51
5	77	64	55	49	75	63	55	48	61	54	48	59	52	47	57	51	47	45
6	71	58	49	43	69	57	49	43	55	48	42	54	47	42	52	46	42	40
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	48	42	37	35
8	62	48	40	34	60	48	40	34	46	39	34	45	39	34	44	38	34	32
9	58	45	36	31	56	44	36	31	43	36	31	42	35	31	41	35	30	29
10	54	41	33	28	53	41	33	28	40	33	28	39	32	28	38	32	28	26

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

	0°	90°	180°
0°	26646	26646	26646
5°	28359	26204	23991
10°	29540	24908	21527
15°	29992	23260	19395
20°	29551	21535	17718
25°	28187	19889	16408
30°	26287	18280	15178
35°	23905	16871	14278
40°	21491	15706	13431
45°	19101	14633	12618
50°	17152	13647	11969
55°	15412	12719	11173
60°	13874	11756	10342
65°	12353	10698	9438
70°	10905	9482	8292
75°	9391	8013	6890
80°	7555	6225	5183
85°	5140	3851	2748



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.0	4.0
10°-20°	116.1	11.1
20°-30°	164.2	15.6
30°-40°	181.8	17.3
40°-50°	175.4	16.7
50°-60°	153.3	14.6
60°-70°	118.2	11.3
70°-80°	73.7	7.0
80°-90°	25.4	2.4
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°	322.3	30.7
0°-40°	504.1	48.0
0°-60°	832.8	79.3
0°-90°	1050.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1050.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	446	446	446	446	446	
5°	484	467	448	414	410	47
15°	520	472	403	348	336	146
25°	481	419	339	291	280	221
35°	389	335	275	242	232	243
45°	286	255	219	197	189	222
55°	204	188	169	154	148	183
65°	137	130	119	108	105	137
75°	81	78	69	63	60	86
85°	30	28	23	18	16	33
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°	446.4	446.4	446.4	446.4	446.4	446.4	446.4	446.4	446.4	446.4	446.4
2.5°	484.3	461.6	469.1	460.5	459.4	454.0	459.4	462.6	454.0	456.2	457.2
5°	484.3	479.9	485.3	476.7	475.6	479.9	474.5	475.6	464.8	467.0	465.9
7.5°	499.4	494.0	500.5	490.7	489.7	491.8	485.3	486.4	473.4	473.4	472.4
10°	510.2	505.9	511.3	500.5	498.3	500.5	492.9	492.9	477.8	476.7	473.4
12.5°	517.8	513.4	517.8	507.0	504.8	505.9	496.1	494.0	478.9	476.7	471.3
15°	519.9	515.6	521.0	508.0	505.9	504.8	495.1	492.9	475.6	472.4	465.9
17.5°	517.8	513.4	517.8	504.8	501.6	499.4	489.7	486.4	469.1	463.7	456.2
20°	510.2	503.7	510.2	497.2	492.9	490.7	478.9	475.6	457.2	450.7	443.2
22.5°	498.3	494.0	498.3	484.3	481.0	477.8	465.9	461.6	443.2	436.7	427.0
25°	481.0	478.9	475.6	468.0	463.7	461.6	449.7	444.3	425.9	419.4	409.7
27.5°	461.6	459.4	461.6	447.5	444.3	439.9	430.2	424.8	406.4	399.9	389.1
30°	439.9	435.6	438.9	425.9	423.7	417.2	407.5	403.2	384.8	379.4	368.6
32.5°	415.1	412.9	415.1	402.1	398.9	394.5	384.8	380.5	363.2	357.8	349.1
35°	389.1	384.8	388.1	376.2	374.0	368.6	360.0	355.6	340.5	335.1	327.5
37.5°	362.1	358.9	362.1	351.3	349.1	343.7	337.3	331.8	317.8	315.6	307.0
40°	337.3	334.0	336.2	327.5	324.3	321.0	314.6	309.1	297.3	294.0	281.0
42.5°	311.3	309.1	311.3	301.6	299.4	296.2	290.8	287.5	276.7	273.5	267.0
45°	286.4	285.4	287.5	280.0	276.7	274.6	269.2	267.0	256.2	255.1	249.7
47.5°	262.7	268.1	263.7	257.3	255.1	251.9	248.6	247.5	237.8	236.7	231.3
50°	243.2	241.0	241.0	235.6	235.6	232.4	230.2	228.1	220.5	220.5	215.1
52.5°	222.7	221.6	221.6	217.3	216.2	215.1	211.9	210.8	203.2	204.3	200.0
55°	204.3	207.5	203.2	198.9	198.9	196.7	195.6	194.6	188.1	188.1	183.8
57.5°	185.9	184.8	185.9	181.6	181.6	179.4	178.4	178.4	171.9	174.0	169.7
60°	169.7	167.5	168.6	165.4	164.3	164.3	165.4	163.2	157.8	158.9	155.7
62.5°	152.4	151.3	153.5	149.2	149.2	149.2	148.1	148.1	142.7	147.0	141.6
65°	137.3	136.2	138.4	135.1	135.1	134.0	133.0	133.0	129.7	129.7	128.6
67.5°	123.2	122.1	124.3	121.1	121.1	120.0	120.0	118.9	115.7	116.7	114.6
70°	108.1	108.1	109.2	107.0	107.0	105.9	105.9	104.9	102.7	103.8	101.6
72.5°	94.0	94.0	95.1	93.0	93.0	91.9	91.9	91.9	89.7	90.8	88.6
75°	81.1	81.1	81.1	80.0	80.0	78.9	78.9	78.9	76.7	77.8	76.7
77.5°	68.1	68.1	68.1	67.0	67.0	65.9	65.9	65.9	63.8	64.9	63.8
80°	55.1	55.1	55.1	54.0	54.0	53.0	53.0	53.0	51.9	53.0	51.9
82.5°	42.2	42.2	43.2	42.2	42.2	41.1	41.1	41.1	40.0	40.0	40.0
85°	30.3	30.3	31.3	30.3	29.2	29.2	29.2	28.1	28.1	28.1	28.1
87.5°	19.5	19.5	19.5	19.5	18.4	18.4	17.3	17.3	17.3	17.3	17.3
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°	446.4	446.4	446.4	446.4	446.4	446.4	446.4	446.4	446.4	446.4	446.4
2.5°	458.3	452.9	454.0	449.7	450.7	448.6	447.5	450.7	441.0	448.6	443.2
5°	465.9	458.3	458.3	451.8	451.8	447.5	444.3	447.5	434.5	441.0	434.5
7.5°	469.1	460.5	458.3	450.7	449.7	443.2	438.9	439.9	427.0	431.3	422.6
10°	470.2	459.4	456.2	446.4	443.2	436.7	429.1	430.2	415.1	419.4	409.7
12.5°	465.9	454.0	449.7	438.9	433.5	425.9	417.2	417.2	401.0	405.4	395.6
15°	459.4	446.4	439.9	428.1	422.6	414.0	404.3	403.2	388.1	389.1	379.4
17.5°	448.6	434.5	425.9	414.0	408.6	398.9	389.1	388.1	372.9	374.0	364.3
20°	434.5	419.4	411.8	399.9	398.9	383.7	374.0	371.8	355.6	357.8	348.1
22.5°	419.4	404.3	395.6	382.7	376.2	366.4	356.7	355.6	340.5	340.5	331.8
25°	399.9	385.9	378.3	365.4	358.9	350.2	339.4	339.4	324.3	324.3	316.7
27.5°	381.6	367.5	358.9	347.0	341.6	339.4	323.2	322.1	308.1	309.1	301.6
30°	361.0	351.3	340.5	328.6	323.2	315.6	307.0	305.9	292.9	288.6	286.4
32.5°	341.6	328.6	322.1	311.3	305.9	298.3	290.8	290.8	277.8	280.0	272.4
35°	321.0	315.6	302.7	292.9	288.6	283.2	274.6	274.6	263.7	264.8	259.4
37.5°	300.5	289.7	289.7	276.7	268.1	267.0	260.5	260.5	249.7	251.9	246.5
40°	282.1	272.4	267.0	260.5	256.2	251.9	246.5	246.5	236.7	238.9	233.5
42.5°	263.7	254.0	250.8	244.3	241.0	236.7	231.3	231.3	223.8	224.8	220.5
45°	246.5	237.8	235.6	232.4	225.9	223.8	218.3	219.4	210.8	211.9	208.6
47.5°	229.2	221.6	219.4	214.0	211.9	208.6	204.3	206.5	197.8	198.9	196.7
50°	214.0	206.5	205.4	200.0	198.9	196.7	192.4	193.5	187.0	188.1	185.9
52.5°	198.9	192.4	191.3	187.0	185.9	182.7	179.4	181.6	175.1	176.2	172.9
55°	183.8	178.4	177.3	172.9	172.9	170.8	166.5	168.6	162.1	164.3	161.1
57.5°	168.6	165.4	163.2	160.0	160.0	157.8	154.6	155.7	151.3	151.3	150.2
60°	155.7	150.2	151.3	147.0	147.0	145.9	141.6	143.8	138.4	139.4	138.4
62.5°	141.6	137.3	137.3	135.1	134.0	133.0	129.7	131.9	126.5	127.6	125.4
65°	128.6	125.4	124.3	122.1	121.1	120.0	117.8	118.9	114.6	115.7	114.6
67.5°	114.6	112.4	111.3	109.2	109.2	108.1	104.9	107.0	102.7	103.8	102.7
70°	101.6	99.4	99.4	96.2	96.2	95.1	93.0	94.0	90.8	90.8	90.8
72.5°	89.7	86.5	85.4	84.3	84.3	83.2	81.1	82.2	78.9	78.9	77.8
75°	76.7	74.6	74.6	72.4	71.3	71.3	69.2	69.2	67.0	67.0	65.9
77.5°	63.8	61.6	61.6	59.5	59.5	59.5	57.3	57.3	55.1	55.1	55.1
80°	51.9	49.7	49.7	47.6	47.6	47.6	45.4	45.4	43.2	43.2	43.2
82.5°	40.0	37.8	37.8	36.8	35.7	35.7	34.6	33.5	32.4	32.4	32.4
85°	28.1	27.0	27.0	25.9	24.9	24.9	22.7	22.7	21.6	21.6	21.6
87.5°	16.2	16.2	15.1	15.1	15.1	14.1	13.0	11.9	10.8	10.8	11.9
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°	446.4	446.4	446.4	446.4	446.4	446.4	446.4	446.4	446.4	446.4	446.4
2.5°	438.9	437.8	438.9	442.1	438.9	430.2	438.9	433.5	429.1	431.3	427.0
5°	428.1	427.0	425.9	428.1	422.6	414.0	422.6	417.2	410.8	410.8	408.6
7.5°	416.2	414.0	411.8	412.9	407.5	397.8	404.3	399.9	394.5	395.6	390.2
10°	403.2	398.9	396.7	396.7	390.2	381.6	387.0	382.7	376.2	377.2	371.8
12.5°	388.1	383.7	381.6	380.5	374.0	365.4	370.8	365.4	360.0	360.0	354.5
15°	368.6	367.5	365.4	364.3	357.8	348.1	354.5	348.1	342.7	343.7	338.3
17.5°	356.7	351.3	348.1	347.0	341.6	332.9	338.3	332.9	327.5	327.5	322.1
20°	341.6	336.2	331.8	331.8	325.4	317.8	323.2	318.9	311.3	313.5	308.1
22.5°	325.4	320.0	317.8	316.7	310.2	304.8	309.1	304.8	298.3	298.3	294.0
25°	310.2	305.9	303.7	302.7	296.2	290.8	295.1	291.9	285.4	286.4	281.0
27.5°	296.2	290.8	288.6	288.6	283.2	277.8	282.1	277.8	272.4	273.5	268.1
30°	281.0	276.7	275.6	275.6	269.2	264.8	268.1	264.8	259.4	260.5	256.2
32.5°	268.1	264.8	262.7	262.7	257.3	254.0	257.3	254.0	249.7	249.7	245.4
35°	255.1	250.8	249.7	254.0	245.4	242.1	244.3	242.1	237.8	237.8	233.5
37.5°	242.1	238.9	237.8	238.9	232.4	229.2	233.5	231.3	227.0	227.0	220.5
40°	229.2	227.0	225.9	225.9	221.6	218.3	222.7	219.4	216.2	216.2	211.9
42.5°	217.3	214.0	214.0	215.1	209.7	207.5	210.8	208.6	204.3	204.3	201.1
45°	206.5	203.2	202.1	203.2	204.3	196.7	200.0	198.9	190.2	194.6	191.3
47.5°	194.6	191.3	191.3	191.3	188.1	184.8	188.1	187.0	182.7	183.8	180.5
50°	183.8	180.5	179.4	180.5	176.2	175.1	178.4	176.2	169.7	172.9	170.8
52.5°	170.8	168.6	168.6	169.7	166.5	164.3	167.5	165.4	162.1	162.1	160.0
55°	160.0	157.8	157.8	158.9	155.7	153.5	155.7	154.6	151.3	151.3	149.2
57.5°	148.1	145.9	147.0	147.0	143.8	142.7	144.8	142.7	140.5	140.5	138.4
60°	136.2	134.0	135.1	135.1	133.0	130.8	133.0	131.9	128.6	128.6	127.6
62.5°	124.3	123.2	123.2	123.2	121.1	120.0	121.1	120.0	117.8	117.8	115.7
65°	113.5	111.3	111.3	111.3	109.2	108.1	109.2	108.1	107.0	105.9	104.9
67.5°	101.6	100.5	99.4	99.4	97.3	97.3	97.3	96.2	95.1	94.0	93.0
70°	89.7	87.6	87.6	87.6	86.5	85.4	85.4	84.3	84.3	83.2	82.2
72.5°	77.8	75.7	76.7	75.7	74.6	73.5	73.5	73.5	72.4	71.3	71.3
75°	65.9	64.9	64.9	64.9	62.7	62.7	62.7	61.6	60.5	60.5	59.5
77.5°	54.0	53.0	55.1	53.0	51.9	50.8	50.8	50.8	48.6	48.6	48.6
80°	43.2	41.1	42.2	42.2	40.0	40.0	38.9	38.9	37.8	37.8	37.8
82.5°	31.3	31.3	31.3	30.3	29.2	29.2	29.2	28.1	27.0	27.0	27.0
85°	20.5	20.5	19.5	19.5	19.5	18.4	18.4	17.3	16.2	16.2	16.2
87.5°	9.7	9.7	9.7	9.7	8.6	8.6	8.6	7.6	7.6	6.5	7.6
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°	446.4	446.4	446.4	446.4
2.5°	425.9	429.1	430.2	428.1
5°	407.5	410.8	410.8	409.7
7.5°	388.1	393.5	392.4	390.2
10°	369.7	375.1	374.0	371.8
12.5°	352.4	356.7	355.6	353.5
15°	335.1	340.5	339.4	336.2
17.5°	320.0	324.3	324.3	321.0
20°	305.9	310.2	309.1	305.9
22.5°	292.9	296.2	295.1	291.9
25°	280.0	289.7	282.1	280.0
27.5°	267.0	271.3	270.2	267.0
30°	255.1	258.3	257.3	254.0
32.5°	244.3	248.6	246.5	244.3
35°	232.4	236.7	234.6	232.4
37.5°	222.7	225.9	223.8	221.6
40°	210.8	215.1	214.0	210.8
42.5°	201.1	204.3	203.2	200.0
45°	191.3	194.6	193.5	189.2
47.5°	180.5	183.8	181.6	179.4
50°	169.7	172.9	171.9	169.7
52.5°	160.0	163.2	161.1	158.9
55°	149.2	152.4	150.2	148.1
57.5°	138.4	141.6	139.4	137.3
60°	126.5	129.7	127.6	126.5
62.5°	115.7	118.9	116.7	115.7
65°	104.9	107.0	105.9	104.9
67.5°	94.0	96.2	94.0	94.0
70°	82.2	84.3	83.2	82.2
72.5°	70.3	72.4	72.4	71.3
75°	59.5	60.5	60.5	59.5
77.5°	48.6	49.7	48.6	48.6
80°	37.8	37.8	37.8	37.8
82.5°	27.0	28.1	27.0	27.0
85°	16.2	17.3	16.2	16.2
87.5°	6.5	7.6	6.5	7.6
90°	0.0	0.0	0.0	0.0

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