

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 - HLM6935 - 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 - HLM6935 - 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 / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1114.1 lumens
Efficiency: N/A
Efficacy: 40.4 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

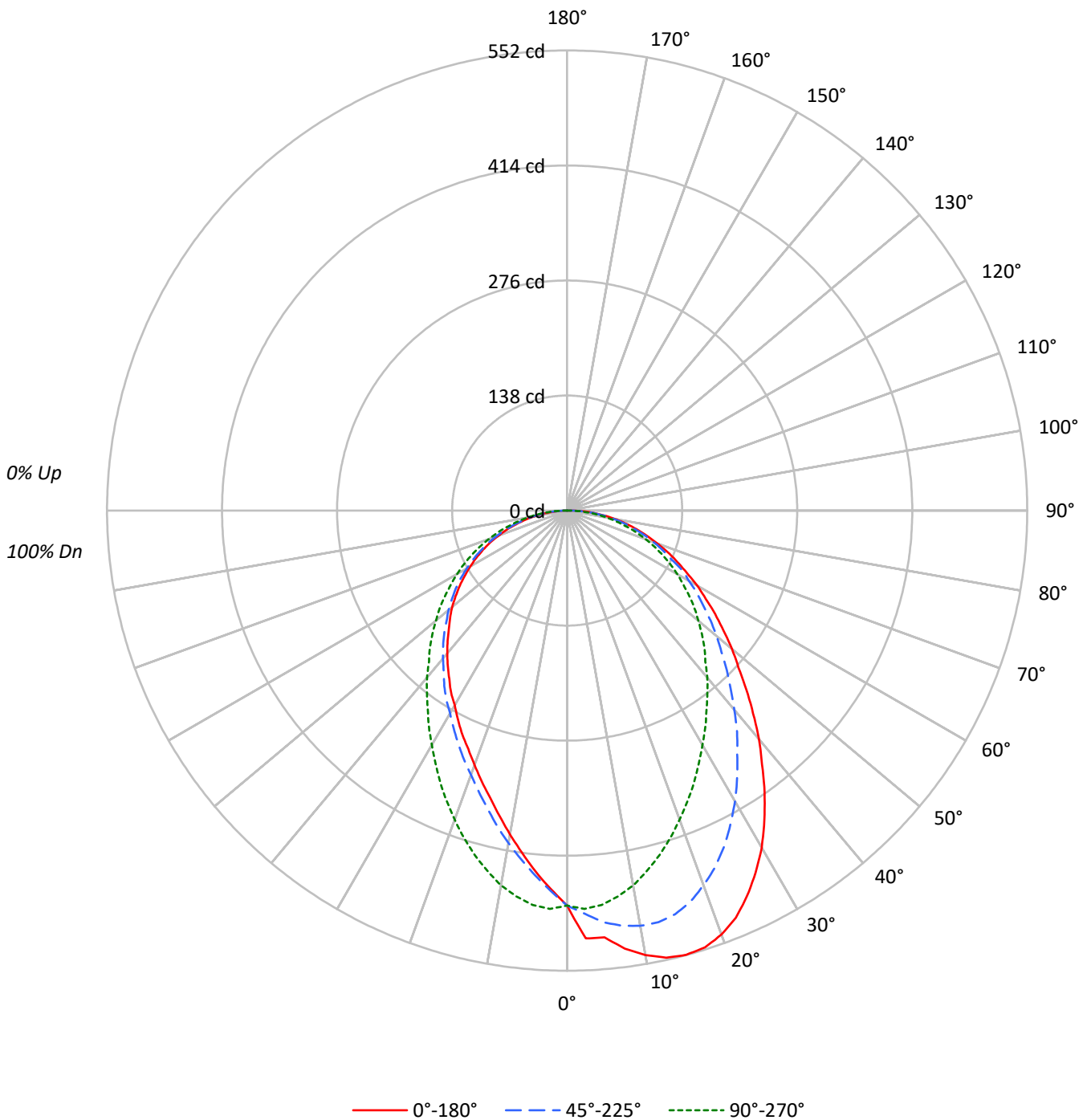
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	28275	28275	28275
5°	30087	27803	25455
10°	31341	26431	22841
15°	31827	24679	20578
20°	31352	22849	18801
25°	29910	21102	17404
30°	27895	19397	16105
35°	25368	17897	15151
40°	22797	16661	14247
45°	20268	15526	13385
50°	18203	14479	12702
55°	16355	13496	11852
60°	14724	12468	10971
65°	13109	11354	10005
70°	11571	10068	8797
75°	9958	8499	7307
80°	8021	6609	5498
85°	5445	4088	2918



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.6	4.0
10°-20°	123.2	11.1
20°-30°	174.2	15.6
30°-40°	192.9	17.3
40°-50°	186.1	16.7
50°-60°	162.6	14.6
60°-70°	125.4	11.3
70°-80°	78.2	7.0
80°-90°	26.9	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°	342.0	30.7
0°-40°	534.9	48.0
0°-60°	883.6	79.3
0°-90°	1114.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1114.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	474	474	474	474	474	
5°	514	496	475	439	435	50
15°	552	501	428	369	357	155
25°	510	445	360	308	297	234
35°	413	356	291	257	247	258
45°	304	271	233	209	201	235
55°	217	200	179	163	157	194
65°	146	138	126	115	111	145
75°	86	83	73	66	63	91
85°	32	30	24	20	17	34
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°	473.7	473.7	473.7	473.7	473.7	473.7	473.7	473.7	473.7	473.7	473.7
2.5°	513.8	489.7	497.8	488.6	487.4	481.7	487.4	490.9	481.7	484.0	485.1
5°	513.8	509.2	515.0	505.8	504.6	509.2	503.5	504.6	493.2	495.5	494.3
7.5°	529.9	524.1	531.0	520.7	519.5	521.8	515.0	516.1	502.3	502.3	501.2
10°	541.3	536.7	542.5	531.0	528.7	531.0	523.0	523.0	506.9	505.8	502.3
12.5°	549.4	544.8	549.4	537.9	535.6	536.7	526.4	524.1	508.1	505.8	500.0
15°	551.7	547.1	552.8	539.0	536.7	535.6	525.3	523.0	504.6	501.2	494.3
17.5°	549.4	544.8	549.4	535.6	532.2	529.9	519.5	516.1	497.8	492.0	484.0
20°	541.3	534.5	541.3	527.6	523.0	520.7	508.1	504.6	485.1	478.3	470.2
22.5°	528.7	524.1	528.7	513.8	510.4	506.9	494.3	489.7	470.2	463.3	453.0
25°	510.4	508.1	504.6	496.6	492.0	489.7	477.1	471.4	451.9	445.0	434.7
27.5°	489.7	487.4	489.7	474.8	471.4	466.8	456.5	450.7	431.2	424.4	412.9
30°	466.8	462.2	465.6	451.9	449.6	442.7	432.4	427.8	408.3	402.6	391.1
32.5°	440.4	438.1	440.4	426.6	423.2	418.6	408.3	403.7	385.4	379.6	370.4
35°	412.9	408.3	411.7	399.1	396.8	391.1	381.9	377.3	361.3	355.5	347.5
37.5°	384.2	380.8	384.2	372.7	370.4	364.7	357.8	352.1	337.2	334.9	325.7
40°	357.8	354.4	356.7	347.5	344.1	340.6	333.7	328.0	315.4	312.0	298.2
42.5°	330.3	328.0	330.3	320.0	317.7	314.2	308.5	305.1	293.6	290.2	283.3
45°	303.9	302.8	305.1	297.0	293.6	291.3	285.6	283.3	271.8	270.7	264.9
47.5°	278.7	284.4	279.8	273.0	270.7	267.2	263.8	262.6	252.3	251.2	245.4
50°	258.1	255.8	255.8	250.0	250.0	246.6	244.3	242.0	234.0	234.0	228.2
52.5°	236.3	235.1	235.1	230.5	229.4	228.2	224.8	223.6	215.6	216.8	212.2
55°	216.8	220.2	215.6	211.0	211.0	208.7	207.6	206.4	199.6	199.6	195.0
57.5°	197.3	196.1	197.3	192.7	192.7	190.4	189.2	189.2	182.4	184.7	180.1
60°	180.1	177.8	178.9	175.5	174.3	174.3	175.5	173.2	167.4	168.6	165.2
62.5°	161.7	160.6	162.9	158.3	158.3	158.3	157.1	157.1	151.4	156.0	150.2
65°	145.7	144.5	146.8	143.4	143.4	142.2	141.1	141.1	137.6	137.6	136.5
67.5°	130.7	129.6	131.9	128.5	128.5	127.3	127.3	126.2	122.7	123.9	121.6
70°	114.7	114.7	115.8	113.5	113.5	112.4	112.4	111.2	109.0	110.1	107.8
72.5°	99.8	99.8	100.9	98.6	98.6	97.5	97.5	97.5	95.2	96.3	94.0
75°	86.0	86.0	86.0	84.9	84.9	83.7	83.7	83.7	81.4	82.6	81.4
77.5°	72.3	72.3	72.3	71.1	71.1	70.0	70.0	70.0	67.7	68.8	67.7
80°	58.5	58.5	58.5	57.3	57.3	56.2	56.2	56.2	55.1	56.2	55.1
82.5°	44.7	44.7	45.9	44.7	44.7	43.6	43.6	43.6	42.4	42.4	42.4
85°	32.1	32.1	33.3	32.1	31.0	31.0	31.0	29.8	29.8	29.8	29.8
87.5°	20.6	20.6	20.6	20.6	19.5	19.5	18.4	18.4	18.4	18.4	18.4
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	473.7	473.7	473.7	473.7	473.7	473.7	473.7	473.7	473.7	473.7	473.7
2.5°	486.3	480.5	481.7	477.1	478.3	476.0	474.8	478.3	467.9	476.0	470.2
5°	494.3	486.3	486.3	479.4	479.4	474.8	471.4	474.8	461.1	467.9	461.1
7.5°	497.8	488.6	486.3	478.3	477.1	470.2	465.6	466.8	453.0	457.6	448.4
10°	498.9	487.4	484.0	473.7	470.2	463.3	455.3	456.5	440.4	445.0	434.7
12.5°	494.3	481.7	477.1	465.6	459.9	451.9	442.7	442.7	425.5	430.1	419.8
15°	487.4	473.7	466.8	454.2	448.4	439.3	428.9	427.8	411.7	412.9	402.6
17.5°	476.0	461.1	451.9	439.3	433.5	423.2	412.9	411.7	395.7	396.8	386.5
20°	461.1	445.0	437.0	424.4	423.2	407.1	396.8	394.5	377.3	379.6	369.3
22.5°	445.0	428.9	419.8	406.0	399.1	388.8	378.5	377.3	361.3	361.3	352.1
25°	424.4	409.4	401.4	387.7	380.8	371.6	360.1	360.1	344.1	344.1	336.0
27.5°	404.9	389.9	380.8	368.2	362.4	360.1	342.9	341.8	326.9	328.0	320.0
30°	383.1	372.7	361.3	348.7	342.9	334.9	325.7	324.6	310.8	306.2	303.9
32.5°	362.4	348.7	341.8	330.3	324.6	316.5	308.5	308.5	294.8	297.0	289.0
35°	340.6	334.9	321.1	310.8	306.2	300.5	291.3	291.3	279.8	281.0	275.3
37.5°	318.8	307.4	307.4	293.6	284.4	283.3	276.4	276.4	264.9	267.2	261.5
40°	299.3	289.0	283.3	276.4	271.8	267.2	261.5	261.5	251.2	253.5	247.7
42.5°	279.8	269.5	266.1	259.2	255.8	251.2	245.4	245.4	237.4	238.6	234.0
45°	261.5	252.3	250.0	246.6	239.7	237.4	231.7	232.8	223.6	224.8	221.4
47.5°	243.1	235.1	232.8	227.1	224.8	221.4	216.8	219.1	209.9	211.0	208.7
50°	227.1	219.1	217.9	212.2	211.0	208.7	204.1	205.3	198.4	199.6	197.3
52.5°	211.0	204.1	203.0	198.4	197.3	193.8	190.4	192.7	185.8	186.9	183.5
55°	195.0	189.2	188.1	183.5	183.5	181.2	176.6	178.9	172.0	174.3	170.9
57.5°	178.9	175.5	173.2	169.7	169.7	167.4	164.0	165.2	160.6	160.6	159.4
60°	165.2	159.4	160.6	156.0	156.0	154.8	150.2	152.5	146.8	147.9	146.8
62.5°	150.2	145.7	145.7	143.4	142.2	141.1	137.6	139.9	134.2	135.3	133.0
65°	136.5	133.0	131.9	129.6	128.5	127.3	125.0	126.2	121.6	122.7	121.6
67.5°	121.6	119.3	118.1	115.8	115.8	114.7	111.2	113.5	109.0	110.1	109.0
70°	107.8	105.5	105.5	102.1	102.1	100.9	98.6	99.8	96.3	96.3	96.3
72.5°	95.2	91.8	90.6	89.5	89.5	88.3	86.0	87.2	83.7	83.7	82.6
75°	81.4	79.1	79.1	76.8	75.7	75.7	73.4	73.4	71.1	71.1	70.0
77.5°	67.7	65.4	65.4	63.1	63.1	63.1	60.8	60.8	58.5	58.5	58.5
80°	55.1	52.8	52.8	50.5	50.5	50.5	48.2	48.2	45.9	45.9	45.9
82.5°	42.4	40.1	40.1	39.0	37.8	37.8	36.7	35.6	34.4	34.4	34.4
85°	29.8	28.7	28.7	27.5	26.4	26.4	24.1	24.1	22.9	22.9	22.9
87.5°	17.2	17.2	16.1	16.1	16.1	14.9	13.8	12.6	11.5	11.5	12.6
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	473.7	473.7	473.7	473.7	473.7	473.7	473.7	473.7	473.7	473.7	473.7
2.5°	465.6	464.5	465.6	469.1	465.6	456.5	465.6	459.9	455.3	457.6	453.0
5°	454.2	453.0	451.9	454.2	448.4	439.3	448.4	442.7	435.8	435.8	433.5
7.5°	441.6	439.3	437.0	438.1	432.4	422.1	428.9	424.4	418.6	419.8	414.0
10°	427.8	423.2	420.9	420.9	414.0	404.9	410.6	406.0	399.1	400.3	394.5
12.5°	411.7	407.1	404.9	403.7	396.8	387.7	393.4	387.7	381.9	381.9	376.2
15°	391.1	389.9	387.7	386.5	379.6	369.3	376.2	369.3	363.6	364.7	359.0
17.5°	378.5	372.7	369.3	368.2	362.4	353.2	359.0	353.2	347.5	347.5	341.8
20°	362.4	356.7	352.1	352.1	345.2	337.2	342.9	338.3	330.3	332.6	326.9
22.5°	345.2	339.5	337.2	336.0	329.2	323.4	328.0	323.4	316.5	316.5	312.0
25°	329.2	324.6	322.3	321.1	314.2	308.5	313.1	309.7	302.8	303.9	298.2
27.5°	314.2	308.5	306.2	306.2	300.5	294.8	299.3	294.8	289.0	290.2	284.4
30°	298.2	293.6	292.5	292.5	285.6	281.0	284.4	281.0	275.3	276.4	271.8
32.5°	284.4	281.0	278.7	278.7	273.0	269.5	273.0	269.5	264.9	264.9	260.3
35°	270.7	266.1	264.9	269.5	260.3	256.9	259.2	256.9	252.3	252.3	247.7
37.5°	256.9	253.5	252.3	253.5	246.6	243.1	247.7	245.4	240.8	240.8	234.0
40°	243.1	240.8	239.7	239.7	235.1	231.7	236.3	232.8	229.4	229.4	224.8
42.5°	230.5	227.1	227.1	228.2	222.5	220.2	223.6	221.4	216.8	216.8	213.3
45°	219.1	215.6	214.5	215.6	216.8	208.7	212.2	211.0	201.9	206.4	203.0
47.5°	206.4	203.0	203.0	203.0	199.6	196.1	199.6	198.4	193.8	195.0	191.5
50°	195.0	191.5	190.4	191.5	186.9	185.8	189.2	186.9	180.1	183.5	181.2
52.5°	181.2	178.9	178.9	180.1	176.6	174.3	177.8	175.5	172.0	172.0	169.7
55°	169.7	167.4	167.4	168.6	165.2	162.9	165.2	164.0	160.6	160.6	158.3
57.5°	157.1	154.8	156.0	156.0	152.5	151.4	153.7	151.4	149.1	149.1	146.8
60°	144.5	142.2	143.4	143.4	141.1	138.8	141.1	139.9	136.5	136.5	135.3
62.5°	131.9	130.7	130.7	130.7	128.5	127.3	128.5	127.3	125.0	125.0	122.7
65°	120.4	118.1	118.1	118.1	115.8	114.7	115.8	114.7	113.5	112.4	111.2
67.5°	107.8	106.7	105.5	105.5	103.2	103.2	103.2	102.1	100.9	99.8	98.6
70°	95.2	92.9	92.9	92.9	91.8	90.6	90.6	89.5	89.5	88.3	87.2
72.5°	82.6	80.3	81.4	80.3	79.1	78.0	78.0	78.0	76.8	75.7	75.7
75°	70.0	68.8	68.8	68.8	66.5	66.5	66.5	65.4	64.2	64.2	63.1
77.5°	57.3	56.2	58.5	56.2	55.1	53.9	53.9	53.9	51.6	51.6	51.6
80°	45.9	43.6	44.7	44.7	42.4	42.4	41.3	41.3	40.1	40.1	40.1
82.5°	33.3	33.3	33.3	32.1	31.0	31.0	31.0	29.8	28.7	28.7	28.7
85°	21.8	21.8	20.6	20.6	20.6	19.5	19.5	18.4	17.2	17.2	17.2
87.5°	10.3	10.3	10.3	10.3	9.2	9.2	9.2	8.0	8.0	6.9	8.0
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°	473.7	473.7	473.7	473.7
2.5°	451.9	455.3	456.5	454.2
5°	432.4	435.8	435.8	434.7
7.5°	411.7	417.5	416.3	414.0
10°	392.2	398.0	396.8	394.5
12.5°	373.9	378.5	377.3	375.0
15°	355.5	361.3	360.1	356.7
17.5°	339.5	344.1	344.1	340.6
20°	324.6	329.2	328.0	324.6
22.5°	310.8	314.2	313.1	309.7
25°	297.0	307.4	299.3	297.0
27.5°	283.3	287.9	286.7	283.3
30°	270.7	274.1	273.0	269.5
32.5°	259.2	263.8	261.5	259.2
35°	246.6	251.2	248.9	246.6
37.5°	236.3	239.7	237.4	235.1
40°	223.6	228.2	227.1	223.6
42.5°	213.3	216.8	215.6	212.2
45°	203.0	206.4	205.3	200.7
47.5°	191.5	195.0	192.7	190.4
50°	180.1	183.5	182.4	180.1
52.5°	169.7	173.2	170.9	168.6
55°	158.3	161.7	159.4	157.1
57.5°	146.8	150.2	147.9	145.7
60°	134.2	137.6	135.3	134.2
62.5°	122.7	126.2	123.9	122.7
65°	111.2	113.5	112.4	111.2
67.5°	99.8	102.1	99.8	99.8
70°	87.2	89.5	88.3	87.2
72.5°	74.5	76.8	76.8	75.7
75°	63.1	64.2	64.2	63.1
77.5°	51.6	52.8	51.6	51.6
80°	40.1	40.1	40.1	40.1
82.5°	28.7	29.8	28.7	28.7
85°	17.2	18.4	17.2	17.2
87.5°	6.9	8.0	6.9	8.0
90°	0.0	0.0	0.0	0.0

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