

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: P130075

Luminaire Tested: **HL618TAT - HLM6927 - HL6NFL - 456W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P130075
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33471)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HL618TAT - HLM6927 - HL6NFL - 456W
Description: HALO ALLSLOPE 6" 30W, White Coilex Baffle, White Metal Trim Ring using 25 Degree Optic at a 6-12 Pitch
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1954.0 lumens
Efficiency: N/A
Efficacy: 70.8 lumens/watt
Spacing Criteria (0/90/45): 1.91 / 0.72 / 1.18
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')
CIE Type: Direct

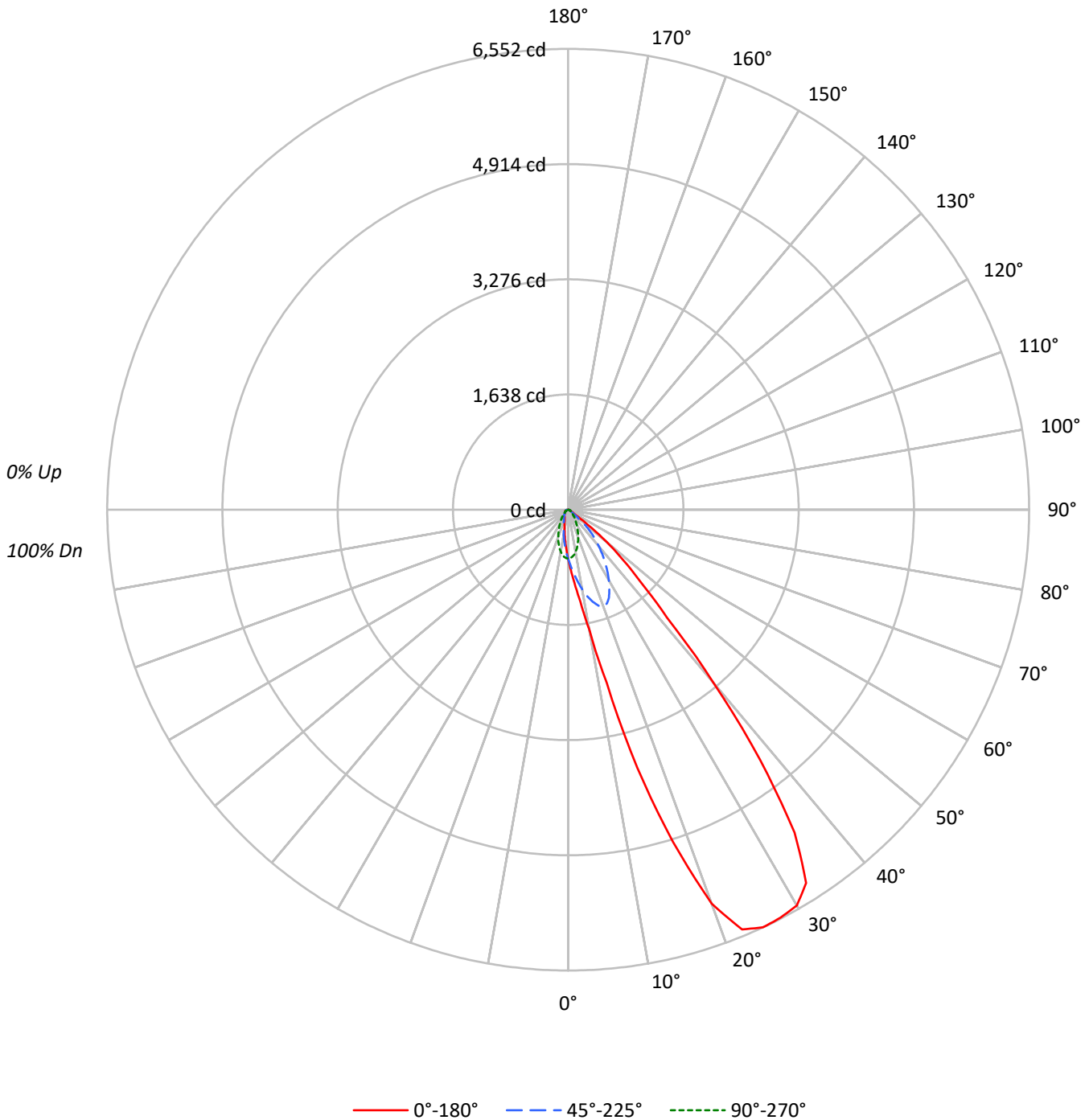
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	112	109	106	103	110	107	104	101	103	100	98	99	97	95	95	94	93	91					91			
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	84	82					82			
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74					74			
4	92	83	76	71	90	82	76	71	79	74	70	77	73	69	75	71	68	66					66			
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60					60			
6	81	70	63	58	79	69	62	57	67	61	57	66	61	57	65	60	56	54					54			
7	76	65	57	52	74	64	57	52	62	56	52	61	56	51	60	55	51	50					50			
8	71	60	52	48	70	59	52	47	58	52	47	57	51	47	56	51	47	45					45			
9	67	55	48	43	65	55	48	43	54	48	43	53	47	43	52	47	43	41					41			
10	63	51	44	40	62	51	44	40	50	44	40	49	43	40	48	43	39	38					38			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	41533	41533	41533
5°	61356	39280	26755
10°	100547	35255	17074
15°	219166	29646	11422
20°	345121	24031	8514
25°	383920	18512	6973
30°	388333	14097	6215
35°	344463	10752	5591
40°	204798	8219	4906
45°	97019	5669	4335
50°	49920	4443	4020
55°	10109	3772	3923
60°	4578	3188	4169
65°	3239	2699	4229
70°	1917	2320	4035
75°	1042	2200	3705
80°	823	1783	3154
85°	509	1187	2036



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.6	3.6
10°-20°	293.1	15.0
20°-30°	608.8	31.2
30°-40°	578.8	29.6
40°-50°	267.2	13.7
50°-60°	72.2	3.7
60°-70°	35.4	1.8
70°-80°	21.1	1.1
80°-90°	7.8	0.4
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°	971.6	49.7
0°-40°	1550.4	79.3
0°-60°	1889.7	96.7
0°-90°	1954.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1954.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	696	696	696	696	696	
5°	1048	910	671	517	457	121
15°	3799	1356	514	248	198	1136
25°	6552	1372	316	141	119	2988
35°	5607	908	175	101	91	3294
45°	1455	460	85	66	65	1247
55°	134	63	50	49	52	205
65°	36	31	30	41	47	36
75°	9	12	19	28	32	11
85°	3	4	7	11	12	3
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°	695.8	695.8	695.8	695.8	695.8	695.8	695.8	695.8	695.8	695.8	695.8
2.5°	855.8	826.8	835.8	836.8	821.8	828.8	817.8	811.8	794.8	796.8	780.8
5°	1047.8	1012.8	1022.8	1015.8	991.8	989.8	963.8	949.8	922.8	909.8	873.8
7.5°	1320.7	1273.7	1280.7	1264.7	1215.7	1192.7	1138.7	1111.7	1051.8	1025.8	970.8
10°	1736.6	1664.6	1666.6	1619.6	1532.6	1467.7	1373.7	1304.7	1204.7	1147.7	1060.8
12.5°	2519.4	2350.5	2274.5	2154.5	1988.5	1826.6	1665.6	1528.6	1370.7	1261.7	1138.7
15°	3799.1	3495.2	3389.2	3087.3	2722.4	2347.5	2004.5	1755.6	1527.6	1355.7	1197.7
17.5°	4949.9	4689.9	4564.0	4217.0	3678.2	3085.3	2449.4	2009.5	1656.6	1430.7	1228.7
20°	5958.6	5757.7	5521.7	5077.8	4433.0	3771.1	2868.3	2208.5	1742.6	1461.7	1226.7
22.5°	6459.5	6346.5	6167.6	5706.7	4960.9	4175.0	3146.3	2301.5	1755.6	1441.7	1187.7
25°	6551.5	6500.5	6402.5	5980.6	5195.8	4302.0	3178.3	2309.5	1694.6	1371.7	1120.7
27.5°	6537.5	6498.5	6416.5	5973.6	5124.8	4155.0	3001.3	2104.5	1584.6	1267.7	1037.8
30°	6498.5	6453.5	6294.6	5728.7	4791.9	3779.1	2612.4	1874.6	1433.7	1150.7	947.8
32.5°	6293.6	6228.6	5921.6	5180.8	4218.0	3170.3	2156.5	1615.6	1256.7	1033.8	853.8
35°	5606.7	5666.7	5074.8	4331.0	3402.2	2471.4	1750.6	1374.7	1084.8	907.8	755.8
37.5°	4483.0	4410.0	4040.1	3348.2	2496.4	1888.6	1451.7	1165.7	945.8	793.8	655.8
40°	3214.3	3224.3	2849.3	2301.5	1804.6	1478.7	1183.7	975.8	806.8	673.8	551.9
42.5°	2079.5	2056.5	1865.6	1615.6	1388.7	1162.7	957.8	816.8	671.8	563.9	462.9
45°	1454.7	1435.7	1356.7	1203.7	1057.8	928.8	783.8	675.8	552.9	459.9	369.9
47.5°	1071.8	1067.8	1011.8	923.8	821.8	718.8	616.9	525.9	417.9	332.9	257.9
50°	707.8	704.8	671.8	607.9	537.9	466.9	389.9	312.9	242.9	191.0	144.0
52.5°	352.9	339.9	334.9	294.9	263.9	221.9	184.0	140.0	114.0	94.0	79.0
55°	134.0	139.0	131.0	117.0	106.0	93.0	84.0	74.0	67.0	63.0	60.0
57.5°	71.0	73.0	71.0	68.0	65.0	63.0	60.0	58.0	55.0	54.0	52.0
60°	56.0	56.0	56.0	54.0	54.0	52.0	50.0	49.0	47.0	46.0	44.0
62.5°	44.0	44.0	45.0	44.0	43.0	43.0	41.0	41.0	39.0	38.0	37.0
65°	36.0	35.0	36.0	35.0	35.0	34.0	33.0	33.0	31.0	31.0	30.0
67.5°	27.0	26.0	27.0	27.0	26.0	27.0	25.0	25.0	24.0	25.0	24.0
70°	19.0	20.0	20.0	20.0	20.0	20.0	19.0	19.0	19.0	19.0	19.0
72.5°	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
75°	9.0	9.0	9.0	10.0	10.0	10.0	10.0	11.0	11.0	12.0	12.0
77.5°	7.0	7.0	7.0	8.0	8.0	8.0	9.0	9.0	9.0	10.0	10.0
80°	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	8.0	8.0	9.0
82.5°	4.0	4.0	4.0	5.0	5.0	5.0	5.0	6.0	6.0	6.0	6.0
85°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0
87.5°	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0	2.0	2.0
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	695.8	695.8	695.8	695.8	695.8	695.8	695.8	695.8	695.8	695.8	695.8
2.5°	761.8	757.8	748.8	743.8	725.8	722.8	700.8	688.8	676.8	665.8	655.8
5°	839.8	823.8	800.8	779.8	750.8	730.8	696.8	670.8	646.9	627.9	606.9
7.5°	917.8	866.8	840.8	804.8	759.8	726.8	680.8	645.9	610.9	582.9	552.9
10°	977.8	921.8	846.8	813.8	755.8	710.8	653.8	608.9	564.9	531.9	496.9
12.5°	1027.8	945.8	875.8	809.8	738.8	679.8	616.9	565.9	515.9	479.9	439.9
15°	1056.8	952.8	865.8	788.8	707.8	642.9	569.9	513.9	464.9	423.9	385.9
17.5°	1060.8	939.8	840.8	752.8	665.8	594.9	522.9	465.9	412.9	369.9	333.9
20°	1038.8	908.8	801.8	707.8	614.9	542.9	470.9	414.9	361.9	320.9	286.9
22.5°	992.8	861.8	750.8	653.8	564.9	487.9	419.9	363.9	314.9	278.9	246.9
25°	933.8	801.8	691.8	594.9	507.9	434.9	367.9	315.9	271.9	240.9	214.0
27.5°	862.8	734.8	625.9	533.9	443.9	380.9	317.9	273.9	240.9	209.0	186.0
30°	786.8	661.8	558.9	468.9	388.9	329.9	274.9	235.9	205.0	181.0	166.0
32.5°	703.8	585.9	492.9	410.9	336.9	280.9	235.9	203.0	179.0	160.0	148.0
35°	622.9	508.9	423.9	349.9	286.9	238.9	202.0	175.0	155.0	141.0	130.0
37.5°	535.9	435.9	361.9	293.9	240.9	205.0	172.0	151.0	136.0	124.0	116.0
40°	449.9	364.9	297.9	243.9	203.0	172.0	148.0	129.0	117.0	108.0	100.0
42.5°	367.9	301.9	243.9	199.0	166.0	141.0	121.0	106.0	97.0	90.0	85.0
45°	294.9	233.9	186.0	151.0	127.0	108.0	94.0	85.0	80.0	77.0	75.0
47.5°	199.0	156.0	128.0	103.0	90.0	81.0	75.0	72.0	70.0	68.0	66.0
50°	114.0	93.0	82.0	74.0	70.0	68.0	65.0	63.0	62.0	60.0	59.0
52.5°	70.0	67.0	65.0	63.0	61.0	59.0	57.0	55.0	54.0	53.0	53.0
55°	59.0	57.0	56.0	54.0	53.0	51.0	50.0	50.0	49.0	48.0	48.0
57.5°	50.0	49.0	48.0	47.0	46.0	45.0	44.0	44.0	43.0	43.0	43.0
60°	43.0	42.0	41.0	40.0	40.0	40.0	39.0	39.0	39.0	39.0	39.0
62.5°	36.0	35.0	35.0	34.0	34.0	34.0	34.0	34.0	35.0	35.0	35.0
65°	30.0	29.0	29.0	29.0	29.0	30.0	30.0	30.0	30.0	31.0	32.0
67.5°	24.0	24.0	24.0	24.0	24.0	25.0	25.0	26.0	27.0	28.0	30.0
70°	19.0	19.0	20.0	20.0	21.0	22.0	22.0	23.0	25.0	26.0	27.0
72.5°	15.0	15.0	17.0	17.0	18.0	19.0	20.0	21.0	22.0	23.0	25.0
75°	13.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0	21.0	22.0
77.5°	11.0	12.0	12.0	13.0	14.0	14.0	15.0	16.0	17.0	18.0	18.0
80°	9.0	9.0	10.0	11.0	11.0	12.0	12.0	13.0	14.0	14.0	15.0
82.5°	7.0	7.0	8.0	8.0	8.0	9.0	9.0	10.0	10.0	11.0	12.0
85°	5.0	5.0	5.0	6.0	6.0	6.0	6.0	7.0	7.0	8.0	8.0
87.5°	2.0	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0	5.0
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	695.8	695.8	695.8	695.8	695.8	695.8	695.8	695.8	695.8	695.8	695.8
2.5°	649.9	629.9	636.9	615.9	618.9	609.9	602.9	598.9	590.9	576.9	578.9
5°	588.9	562.9	564.9	533.9	526.9	516.9	500.9	494.9	487.9	475.9	467.9
7.5°	532.9	496.9	491.9	462.9	447.9	436.9	415.9	406.9	391.9	384.9	375.9
10°	468.9	432.9	422.9	388.9	374.9	360.9	339.9	329.9	318.9	308.9	301.9
12.5°	410.9	373.9	357.9	327.9	313.9	298.9	277.9	271.9	260.9	252.9	245.9
15°	355.9	319.9	301.9	275.9	263.9	247.9	235.9	226.9	217.0	209.0	204.0
17.5°	305.9	272.9	259.9	234.9	222.9	209.0	199.0	190.0	183.0	177.0	172.0
20°	261.9	232.9	220.9	200.0	190.0	181.0	170.0	165.0	163.0	154.0	150.0
22.5°	224.9	201.0	191.0	174.0	166.0	159.0	150.0	145.0	141.0	136.0	133.0
25°	195.0	175.0	168.0	153.0	148.0	141.0	135.0	131.0	127.0	124.0	121.0
27.5°	172.0	155.0	149.0	137.0	133.0	128.0	123.0	120.0	117.0	114.0	112.0
30°	153.0	139.0	135.0	125.0	122.0	118.0	114.0	112.0	110.0	107.0	105.0
32.5°	137.0	125.0	122.0	115.0	113.0	110.0	107.0	105.0	102.0	100.0	98.0
35°	122.0	114.0	112.0	105.0	104.0	101.0	98.0	96.0	94.0	92.0	91.0
37.5°	109.0	102.0	101.0	95.0	93.0	91.0	88.0	87.0	86.0	85.0	84.0
40°	95.0	89.0	88.0	83.0	83.0	82.0	80.0	79.0	78.0	78.0	76.0
42.5°	80.0	78.0	78.0	75.0	75.0	74.0	72.0	72.0	70.0	70.0	69.0
45°	73.0	70.0	70.0	67.0	67.0	66.0	65.0	65.0	65.0	65.0	64.0
47.5°	65.0	62.0	63.0	61.0	61.0	61.0	61.0	61.0	60.0	60.0	60.0
50°	58.0	56.0	58.0	56.0	57.0	57.0	56.0	57.0	57.0	56.0	56.0
52.5°	53.0	52.0	53.0	52.0	53.0	53.0	52.0	53.0	53.0	53.0	53.0
55°	48.0	47.0	49.0	48.0	49.0	49.0	49.0	50.0	50.0	51.0	50.0
57.5°	44.0	43.0	45.0	44.0	45.0	46.0	46.0	47.0	48.0	49.0	49.0
60°	40.0	40.0	41.0	41.0	43.0	44.0	45.0	46.0	47.0	49.0	49.0
62.5°	36.0	37.0	39.0	38.0	41.0	43.0	44.0	45.0	46.0	47.0	47.0
65°	34.0	34.0	37.0	38.0	40.0	41.0	42.0	43.0	44.0	45.0	45.0
67.5°	32.0	32.0	35.0	35.0	38.0	38.0	39.0	41.0	41.0	42.0	42.0
70°	29.0	30.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	39.0
72.5°	26.0	27.0	29.0	29.0	31.0	32.0	33.0	34.0	34.0	35.0	35.0
75°	23.0	23.0	25.0	26.0	27.0	28.0	29.0	30.0	30.0	31.0	31.0
77.5°	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0	26.0	27.0	27.0
80°	16.0	16.0	17.0	18.0	19.0	20.0	20.0	21.0	21.0	22.0	22.0
82.5°	12.0	13.0	13.0	14.0	15.0	15.0	16.0	16.0	17.0	17.0	17.0
85°	9.0	9.0	9.0	10.0	10.0	11.0	11.0	11.0	12.0	12.0	12.0
87.5°	5.0	5.0	5.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0
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°	695.8	695.8	695.8	695.8
2.5°	579.9	572.9	580.9	572.9
5°	467.9	456.9	464.9	456.9
7.5°	376.9	368.9	367.9	364.9
10°	299.9	291.9	290.9	294.9
12.5°	244.9	237.9	237.9	238.9
15°	202.0	196.0	198.0	198.0
17.5°	171.0	170.0	168.0	168.0
20°	151.0	146.0	146.0	147.0
22.5°	134.0	130.0	130.0	131.0
25°	123.0	118.0	119.0	119.0
27.5°	112.0	110.0	111.0	111.0
30°	105.0	103.0	104.0	104.0
32.5°	99.0	96.0	97.0	98.0
35°	92.0	90.0	91.0	91.0
37.5°	85.0	83.0	84.0	85.0
40°	77.0	76.0	76.0	77.0
42.5°	69.0	68.0	69.0	70.0
45°	65.0	64.0	64.0	65.0
47.5°	61.0	60.0	60.0	61.0
50°	57.0	56.0	57.0	57.0
52.5°	53.0	53.0	53.0	54.0
55°	51.0	51.0	52.0	52.0
57.5°	51.0	51.0	51.0	52.0
60°	50.0	50.0	51.0	51.0
62.5°	48.0	49.0	49.0	49.0
65°	46.0	45.0	47.0	47.0
67.5°	43.0	43.0	43.0	44.0
70°	40.0	40.0	40.0	40.0
72.5°	36.0	36.0	36.0	36.0
75°	32.0	32.0	32.0	32.0
77.5°	27.0	27.0	27.0	28.0
80°	22.0	22.0	22.0	23.0
82.5°	17.0	17.0	17.0	17.0
85°	12.0	12.0	12.0	12.0
87.5°	7.0	7.0	7.0	7.0
90°	0.0	0.0	0.0	0.0

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