

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: P130083

Luminaire Tested: **HL618TAT - HLM6927 - HL6NFL - 70PS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P130083
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33474)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HL618TAT - HLM6927 - HL6NFL - 70PS
Description: HALO ALLSLOPE 6" 30W, Albalite Glass Lens, White Polymer Trim Ring
"Dead Front", Wet Location - Showerlight 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: 1007.0 lumens
Efficiency: N/A
Efficacy: 36.5 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.04 / 1.23
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')
CIE Type: Direct

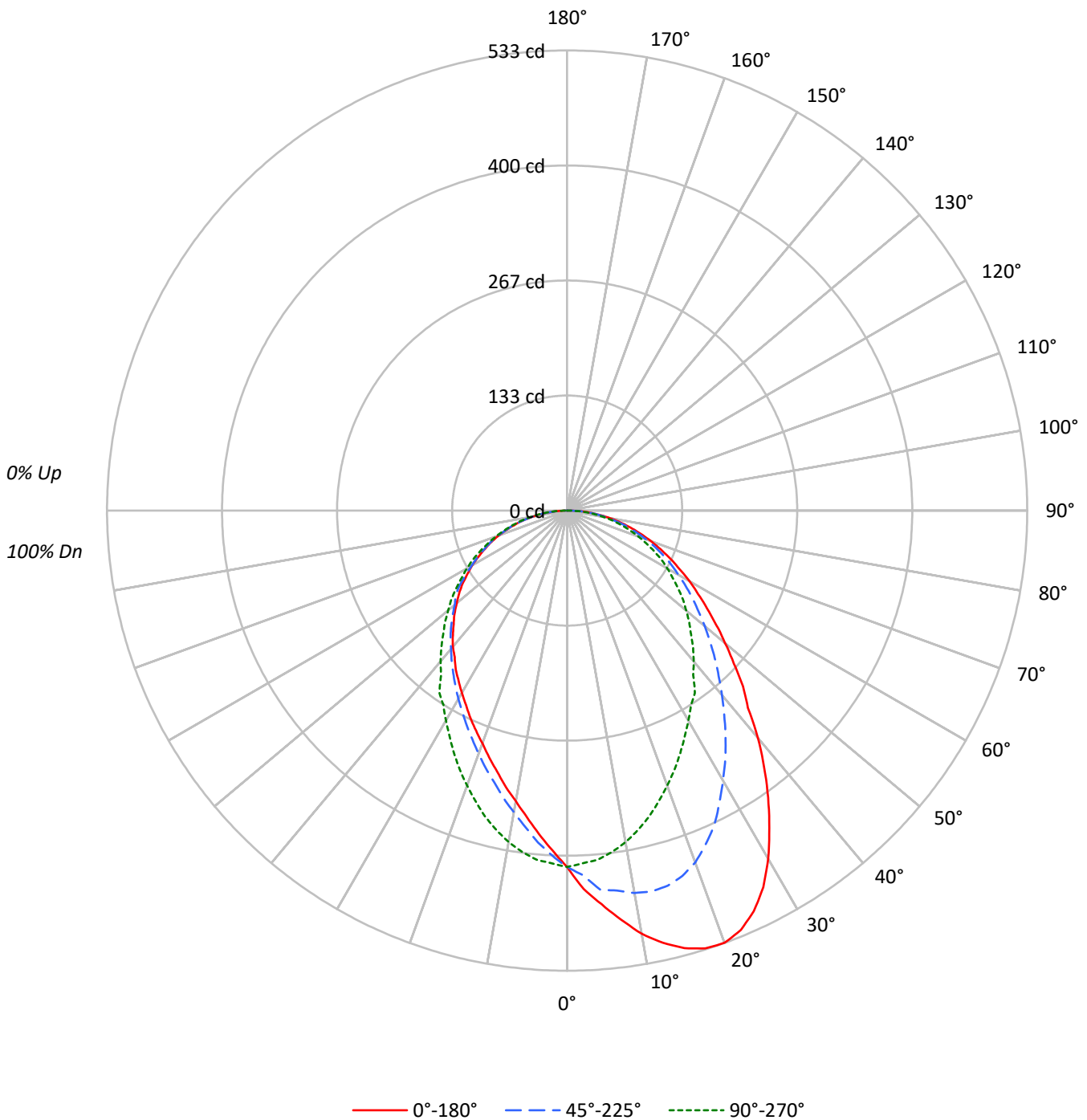
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	91	88	90	88	86	84
2	99	91	84	78	96	89	83	77	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	67	60	55	65	59	54	63	58	53	51
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	43	69	57	49	43	55	48	42	53	47	42	52	46	41	39
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	38	34	44	38	33	31
9	58	44	36	31	56	44	36	31	43	36	31	42	35	30	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°	24640	24640	24640
5°	26808	23768	22012
10°	28822	22575	19796
15°	30275	21166	18051
20°	30860	19629	16617
25°	29992	18160	15523
30°	27835	16786	14575
35°	24938	15845	13817
40°	21911	14521	13119
45°	19201	13532	12398
50°	16849	12688	11771
55°	14929	11836	11157
60°	13400	10955	10383
65°	11876	9987	9447
70°	10390	8877	8474
75°	8800	7527	7179
80°	6856	5896	5485
85°	4411	3562	3223



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.1	3.9
10°-20°	110.0	10.9
20°-30°	158.1	15.7
30°-40°	175.2	17.4
40°-50°	168.6	16.7
50°-60°	147.2	14.6
60°-70°	113.6	11.3
70°-80°	70.8	7.0
80°-90°	24.3	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°	307.2	30.5
0°-40°	482.4	47.9
0°-60°	798.3	79.3
0°-90°	1007.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1007.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	413	413	413	413	413	
5°	458	441	406	386	376	45
15°	525	450	367	326	313	148
25°	512	403	310	275	265	234
35°	406	320	258	230	225	253
45°	288	242	203	190	186	222
55°	198	177	157	153	148	178
65°	132	123	111	106	105	131
75°	76	72	65	63	62	80
85°	26	25	21	20	19	28
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°	412.8	412.8	412.8	412.8	412.8	412.8	412.8	412.8	412.8	412.8	412.8
2.5°	438.8	428.8	430.8	431.8	430.8	424.8	424.8	426.8	425.8	422.8	425.8
5°	457.8	447.8	449.8	448.8	447.8	441.8	439.8	440.8	439.8	440.8	436.8
7.5°	477.8	467.8	468.8	467.8	464.8	456.8	453.8	452.8	450.8	443.8	442.8
10°	497.8	484.8	484.8	484.8	480.8	469.8	465.8	462.8	458.8	449.8	446.8
12.5°	512.8	500.8	499.8	498.8	492.8	488.8	473.8	468.8	462.8	451.8	446.8
15°	524.8	511.8	511.8	507.8	500.8	485.8	478.8	470.8	462.8	449.8	442.8
17.5°	531.8	519.8	517.8	512.8	503.8	487.8	477.8	467.8	457.8	443.8	435.8
20°	532.8	520.8	527.8	511.8	500.8	482.8	470.8	459.8	448.8	433.8	422.8
22.5°	525.8	513.8	520.8	502.8	491.8	472.8	459.8	446.8	434.8	418.8	408.9
25°	511.8	500.8	495.8	488.8	476.8	457.8	443.8	429.8	417.8	402.9	391.9
27.5°	491.8	480.8	474.8	467.8	456.8	437.8	423.8	409.9	397.9	381.9	371.9
30°	465.8	454.8	449.8	443.8	432.8	413.8	400.9	387.9	376.9	360.9	352.9
32.5°	435.8	428.8	421.8	416.8	407.9	389.9	376.9	364.9	354.9	340.9	332.9
35°	405.9	398.9	383.9	387.9	378.9	363.9	349.9	340.9	331.9	319.9	311.9
37.5°	374.9	367.9	361.9	357.9	343.9	336.9	324.9	316.9	308.9	298.9	291.9
40°	343.9	337.9	332.9	329.9	323.9	310.9	301.9	294.9	286.9	278.9	272.9
42.5°	309.9	308.9	305.9	302.9	297.9	286.9	278.9	272.9	266.9	259.9	254.9
45°	287.9	282.9	279.9	276.9	272.9	262.9	257.9	252.9	247.9	241.9	236.9
47.5°	261.9	257.9	255.9	253.9	249.9	240.9	236.9	232.9	228.9	223.9	220.9
50°	238.9	235.9	232.9	230.9	228.9	221.9	218.9	219.9	211.9	207.9	205.9
52.5°	217.9	214.9	212.9	210.9	208.9	203.9	200.9	197.9	195.9	191.9	189.9
55°	197.9	194.9	192.9	191.9	193.9	185.9	183.9	181.9	179.9	176.9	176.9
57.5°	179.9	176.9	175.9	175.9	173.9	169.9	167.9	166.9	164.9	162.9	161.9
60°	163.9	160.9	158.9	159.9	157.9	153.9	156.9	150.9	150.9	148.9	147.9
62.5°	146.9	144.9	143.9	143.9	141.9	139.9	138.9	137.9	136.9	136.0	135.0
65°	132.0	130.0	129.0	129.0	128.0	125.0	124.0	124.0	123.0	123.0	122.0
67.5°	117.0	115.0	115.0	115.0	114.0	112.0	111.0	111.0	110.0	110.0	109.0
70°	103.0	101.0	100.0	101.0	100.0	99.0	97.0	97.0	97.0	97.0	96.0
72.5°	89.0	88.0	87.0	88.0	87.0	85.0	84.0	86.0	84.0	84.0	83.0
75°	76.0	75.0	74.0	75.0	73.0	73.0	72.0	72.0	71.0	72.0	71.0
77.5°	63.0	62.0	62.0	62.0	61.0	60.0	59.0	60.0	59.0	59.0	59.0
80°	50.0	49.0	49.0	50.0	49.0	48.0	47.0	48.0	47.0	47.0	47.0
82.5°	38.0	37.0	37.0	38.0	37.0	36.0	35.0	36.0	36.0	35.0	36.0
85°	26.0	26.0	26.0	26.0	26.0	24.0	24.0	24.0	24.0	25.0	25.0
87.5°	15.0	15.0	15.0	15.0	15.0	14.0	13.0	14.0	14.0	14.0	14.0
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°	412.8	412.8	412.8	412.8	412.8	412.8	412.8	412.8	412.8	412.8	412.8
2.5°	428.8	421.8	420.8	416.8	414.8	416.8	416.8	408.9	412.8	406.9	408.9
5°	437.8	427.8	425.8	419.8	415.8	415.8	414.8	405.9	407.9	399.9	399.9
7.5°	442.8	432.8	426.8	419.8	413.8	413.8	408.9	398.9	399.9	390.9	389.9
10°	443.8	431.8	424.8	416.8	408.9	405.9	401.9	389.9	388.9	379.9	378.9
12.5°	442.8	427.8	419.8	409.9	401.9	396.9	390.9	378.9	377.9	367.9	364.9
15°	436.8	420.8	411.8	399.9	389.9	384.9	378.9	366.9	364.9	353.9	351.9
17.5°	427.8	409.9	400.9	388.9	377.9	371.9	365.9	352.9	350.9	348.9	337.9
20°	413.8	396.9	385.9	373.9	363.9	356.9	350.9	338.9	335.9	325.9	323.9
22.5°	398.9	382.9	371.9	359.9	349.9	340.9	335.9	324.9	321.9	311.9	309.9
25°	381.9	365.9	354.9	342.9	333.9	326.9	320.9	309.9	307.9	297.9	295.9
27.5°	362.9	347.9	337.9	326.9	317.9	311.9	305.9	294.9	293.9	284.9	282.9
30°	344.9	329.9	321.9	309.9	300.9	296.9	290.9	280.9	279.9	271.9	269.9
32.5°	324.9	311.9	302.9	293.9	285.9	281.9	276.9	266.9	265.9	258.9	256.9
35°	304.9	292.9	285.9	277.9	269.9	266.9	262.9	257.9	251.9	245.9	244.9
37.5°	286.9	275.9	269.9	261.9	254.9	251.9	247.9	239.9	238.9	233.9	233.9
40°	268.9	258.9	253.9	246.9	240.9	237.9	234.9	227.9	226.9	221.9	221.9
42.5°	250.9	242.9	237.9	236.9	226.9	223.9	221.9	215.9	214.9	209.9	210.9
45°	234.9	226.9	222.9	218.9	212.9	210.9	208.9	202.9	203.9	198.9	199.9
47.5°	218.9	211.9	208.9	204.9	199.9	197.9	196.9	191.9	191.9	186.9	187.9
50°	203.9	197.9	194.9	190.9	186.9	186.9	184.9	179.9	180.9	176.9	176.9
52.5°	189.9	183.9	181.9	177.9	174.9	174.9	173.9	168.9	168.9	165.9	165.9
55°	175.9	170.9	168.9	165.9	162.9	161.9	160.9	156.9	157.9	154.9	154.9
57.5°	160.9	156.9	155.9	152.9	150.9	149.9	148.9	144.9	145.9	143.9	143.9
60°	146.9	143.9	142.9	140.9	137.9	137.9	136.9	134.0	135.0	132.0	133.0
62.5°	134.0	129.0	130.0	131.0	127.0	127.0	126.0	123.0	123.0	121.0	122.0
65°	121.0	117.0	118.0	117.0	115.0	115.0	114.0	111.0	112.0	110.0	110.0
67.5°	108.0	107.0	106.0	105.0	105.0	103.0	102.0	99.0	100.0	98.0	99.0
70°	96.0	94.0	94.0	92.0	90.0	91.0	90.0	88.0	89.0	87.0	88.0
72.5°	84.0	82.0	82.0	80.0	79.0	79.0	78.0	76.0	77.0	76.0	76.0
75°	72.0	70.0	69.0	69.0	68.0	67.0	67.0	65.0	66.0	64.0	65.0
77.5°	59.0	58.0	58.0	57.0	56.0	56.0	55.0	54.0	54.0	53.0	53.0
80°	47.0	47.0	46.0	45.0	45.0	45.0	44.0	43.0	43.0	42.0	42.0
82.5°	36.0	35.0	35.0	35.0	34.0	33.0	33.0	32.0	32.0	32.0	31.0
85°	25.0	24.0	24.0	23.0	23.0	23.0	22.0	21.0	21.0	21.0	21.0
87.5°	14.0	13.0	13.0	13.0	12.0	13.0	12.0	11.0	11.0	11.0	11.0
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°	412.8	412.8	412.8	412.8	412.8	412.8	412.8	412.8	412.8	412.8	412.8
2.5°	406.9	407.9	405.9	402.9	402.9	399.9	401.9	399.9	400.9	396.9	394.9
5°	397.9	397.9	393.9	389.9	388.9	385.9	385.9	383.9	383.9	379.9	376.9
7.5°	385.9	385.9	380.9	376.9	374.9	369.9	369.9	367.9	367.9	362.9	360.9
10°	373.9	372.9	365.9	362.9	359.9	354.9	354.9	352.9	351.9	346.9	345.9
12.5°	360.9	358.9	352.9	347.9	344.9	340.9	339.9	336.9	336.9	331.9	329.9
15°	346.9	344.9	338.9	333.9	330.9	325.9	324.9	322.9	321.9	316.9	315.9
17.5°	332.9	329.9	324.9	319.9	316.9	312.9	311.9	308.9	307.9	303.9	302.9
20°	318.9	316.9	310.9	305.9	303.9	299.9	297.9	294.9	294.9	290.9	288.9
22.5°	305.9	302.9	296.9	293.9	290.9	286.9	285.9	283.9	282.9	278.9	277.9
25°	292.9	289.9	284.9	280.9	283.9	274.9	272.9	271.9	270.9	266.9	265.9
27.5°	279.9	277.9	271.9	268.9	265.9	262.9	261.9	259.9	259.9	256.9	255.9
30°	265.9	265.9	259.9	257.9	254.9	251.9	251.9	248.9	248.9	245.9	244.9
32.5°	254.9	253.9	248.9	245.9	243.9	240.9	240.9	238.9	238.9	235.9	234.9
35°	242.9	241.9	236.9	234.9	232.9	229.9	230.9	228.9	227.9	225.9	225.9
37.5°	231.9	230.9	225.9	223.9	221.9	219.9	219.9	218.9	217.9	214.9	214.9
40°	219.9	221.9	214.9	213.9	210.9	208.9	209.9	207.9	207.9	205.9	205.9
42.5°	207.9	207.9	204.9	202.9	200.9	199.9	199.9	197.9	197.9	195.9	195.9
45°	197.9	197.9	193.9	196.9	190.9	189.9	189.9	187.9	187.9	185.9	185.9
47.5°	186.9	186.9	183.9	181.9	180.9	179.9	179.9	177.9	177.9	175.9	175.9
50°	176.9	176.9	173.9	171.9	170.9	169.9	169.9	167.9	167.9	165.9	166.9
52.5°	165.9	164.9	162.9	161.9	160.9	162.9	159.9	158.9	157.9	156.9	156.9
55°	153.9	154.9	152.9	151.9	149.9	152.9	148.9	148.9	147.9	145.9	146.9
57.5°	145.9	143.9	141.9	140.9	139.9	138.9	138.9	137.9	137.9	136.0	136.9
60°	132.0	133.0	131.0	130.0	129.0	128.0	128.0	127.0	127.0	126.0	126.0
62.5°	121.0	122.0	120.0	119.0	118.0	117.0	117.0	116.0	116.0	115.0	115.0
65°	110.0	110.0	109.0	108.0	107.0	106.0	106.0	106.0	105.0	105.0	105.0
67.5°	99.0	99.0	98.0	97.0	96.0	96.0	95.0	94.0	94.0	94.0	94.0
70°	87.0	87.0	87.0	86.0	85.0	85.0	84.0	83.0	83.0	83.0	83.0
72.5°	76.0	76.0	76.0	75.0	74.0	74.0	73.0	72.0	72.0	72.0	72.0
75°	65.0	65.0	64.0	64.0	63.0	63.0	62.0	61.0	61.0	61.0	61.0
77.5°	54.0	54.0	54.0	53.0	52.0	52.0	51.0	50.0	50.0	51.0	50.0
80°	42.0	43.0	43.0	42.0	41.0	41.0	40.0	40.0	39.0	40.0	40.0
82.5°	32.0	32.0	32.0	31.0	31.0	30.0	31.0	29.0	29.0	29.0	29.0
85°	22.0	22.0	22.0	21.0	20.0	20.0	20.0	19.0	18.0	19.0	19.0
87.5°	12.0	11.0	11.0	11.0	11.0	10.0	10.0	10.0	9.0	10.0	10.0
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°	412.8	412.8	412.8	412.8
2.5°	397.9	397.9	399.9	393.9
5°	378.9	379.9	381.9	375.9
7.5°	361.9	362.9	363.9	357.9
10°	344.9	346.9	347.9	341.9
12.5°	327.9	330.9	332.9	327.9
15°	315.9	315.9	317.9	312.9
17.5°	301.9	302.9	303.9	299.9
20°	288.9	289.9	290.9	286.9
22.5°	276.9	278.9	278.9	275.9
25°	265.9	266.9	267.9	264.9
27.5°	254.9	255.9	256.9	253.9
30°	244.9	247.9	245.9	243.9
32.5°	234.9	235.9	235.9	233.9
35°	229.9	224.9	226.9	224.9
37.5°	213.9	214.9	215.9	213.9
40°	204.9	205.9	205.9	205.9
42.5°	195.9	194.9	196.9	195.9
45°	189.9	185.9	186.9	185.9
47.5°	175.9	175.9	176.9	176.9
50°	165.9	166.9	166.9	166.9
52.5°	155.9	156.9	157.9	157.9
55°	146.9	146.9	147.9	147.9
57.5°	136.0	136.0	136.9	136.9
60°	126.0	126.0	127.0	127.0
62.5°	115.0	115.0	116.0	116.0
65°	104.0	104.0	105.0	105.0
67.5°	94.0	94.0	94.0	95.0
70°	83.0	83.0	83.0	84.0
72.5°	72.0	72.0	73.0	73.0
75°	61.0	61.0	62.0	62.0
77.5°	50.0	50.0	51.0	52.0
80°	40.0	40.0	40.0	40.0
82.5°	29.0	29.0	30.0	31.0
85°	19.0	19.0	19.0	19.0
87.5°	10.0	10.0	10.0	11.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)