

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: P130231

Luminaire Tested: **HL612ICAT - HLM6930 - HL6NFL - ERT702**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P130231
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33479)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HL612ICAT - HLM6930 - HL6NFL - ERT702
Description: HALO ALLSLOPE 6" 21W, Drop Opal Plastic 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 / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1095.8 lumens
Efficiency: N/A
Efficacy: 57.4 lumens/watt
Spacing Criteria (0/90/45): 1.5 / 0.84 / 1.15
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')
CIE Type: Direct

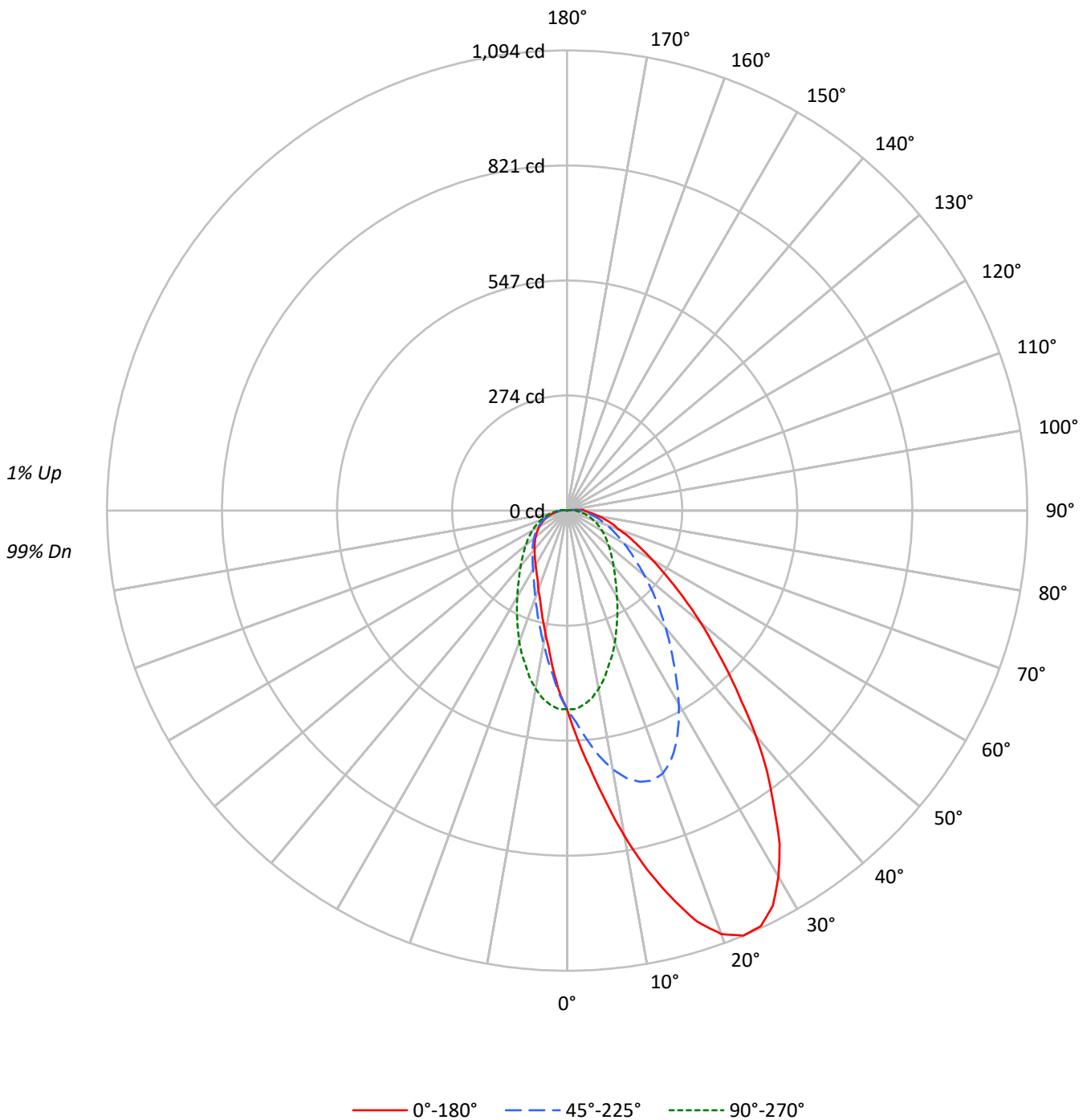
Input Watts (W): 19.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	110	110	106	106	106	101	101	101	99								
1	109	104	100	96	106	102	98	94	97	94	91	93	90	88	89	87	85	83								
2	100	92	85	80	97	90	84	79	86	81	77	83	78	75	79	76	73	71								
3	91	81	74	67	89	80	73	67	77	71	65	74	69	64	71	67	63	61								
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	64	59	55	53								
5	78	66	57	51	76	65	57	51	63	55	50	60	54	49	59	53	49	47								
6	73	60	51	45	71	59	51	45	57	50	45	55	49	44	54	48	44	42								
7	68	55	46	41	66	54	46	40	52	45	40	51	44	40	49	44	39	37								
8	63	50	42	37	62	50	42	36	48	41	36	47	41	36	46	40	36	34								
9	59	46	39	33	58	46	38	33	45	38	33	43	37	33	42	37	32	31								
10	56	43	35	30	54	43	35	30	41	35	30	40	34	30	40	34	30	28								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	28186	28186	28186
5°	35849	27106	22187
10°	45491	24908	17161
15°	54793	21945	13776
20°	62044	19241	11578
25°	63869	16502	9939
30°	60014	14133	8970
35°	52622	12281	8220
40°	44409	10953	7684
45°	35955	9857	7263
50°	29241	9056	6912
55°	23416	8389	6571
60°	19082	7824	6230
65°	15817	7279	5875
70°	13104	6668	5498
75°	11892	6218	4956
80°	10448	5443	4264
85°	9110	4750	3698



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.4	4.1
10°-20°	134.6	12.3
20°-30°	195.7	17.9
30°-40°	200.7	18.3
40°-50°	171.6	15.7
50°-60°	133.9	12.2
60°-70°	98.9	9.0
70°-80°	66.3	6.1
80°-90°	36.5	3.3
90°-100°	12.2	1.1
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°	375.7	34.3
0°-40°	576.3	52.6
0°-60°	881.8	80.5
0°-90°	1083.6	98.9
90°-120°	12.2	1.1
90°-150°	12.2	1.1
90°-180°	12.0	1.1
0°-180°	1095.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	472	472	472	472	472	
5°	612	548	463	392	379	64
15°	950	668	380	265	239	272
25°	1090	612	282	187	170	494
35°	856	441	200	143	134	535
45°	539	298	148	115	109	419
55°	310	193	111	92	87	282
65°	176	125	81	68	65	176
75°	103	79	54	44	43	109
85°	54	43	28	22	22	49
90°	40	32	20	16	16	22
95°	24	7	15	5	10	12
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	472.2	472.2	472.2	472.2	472.2	472.2	472.2	472.2	472.2	472.2	472.2
2.5°	540.7	520.4	530.5	525.9	525.9	523.5	516.5	524.3	518.1	504.9	504.9
5°	612.2	595.1	604.4	593.6	592.0	587.3	575.7	578.8	567.1	547.7	543.8
7.5°	694.7	672.1	680.7	668.2	663.6	654.2	636.3	634.0	614.6	588.9	577.2
10°	785.7	756.1	765.5	746.8	739.8	725.8	694.7	687.7	658.1	624.7	605.2
12.5°	872.8	843.3	847.9	826.9	810.6	788.8	750.7	734.4	697.0	651.1	624.7
15°	949.8	923.4	927.3	897.7	875.2	842.5	795.0	770.9	723.5	667.5	634.0
17.5°	1023.8	991.1	990.3	956.1	932.7	883.7	828.5	794.3	738.3	672.9	632.5
20°	1071.2	1038.5	1035.4	991.9	959.2	907.1	840.9	800.5	736.7	665.1	620.0
22.5°	1093.8	1061.1	1053.3	1005.9	968.5	910.2	837.0	788.8	720.4	644.1	595.9
25°	1089.9	1056.4	1046.3	995.7	955.3	891.5	833.9	762.4	690.8	612.2	564.0
27.5°	1058.8	1026.1	1013.6	965.4	941.3	856.5	777.1	721.9	651.1	573.3	525.9
30°	1004.3	974.7	961.5	914.1	868.9	803.6	723.5	674.5	602.9	531.3	483.9
32.5°	940.5	907.8	894.6	849.5	805.2	745.3	669.8	620.8	553.9	485.4	444.2
35°	856.5	836.3	822.3	775.6	740.6	679.9	608.3	564.8	502.5	441.1	403.7
37.5°	780.3	756.9	742.1	701.7	669.0	613.8	551.6	511.9	456.6	402.2	366.4
40°	697.0	677.6	667.5	627.8	597.4	550.0	498.7	461.3	413.9	364.1	334.5
42.5°	613.0	597.4	592.0	557.8	532.1	491.7	446.5	414.6	372.6	329.8	301.8
45°	539.1	525.9	521.2	492.4	471.4	437.2	400.6	371.1	335.3	297.9	273.8
47.5°	471.4	462.1	456.6	431.7	415.4	387.4	352.4	330.6	299.5	267.6	247.4
50°	414.6	401.4	399.9	376.5	364.1	339.2	311.2	294.1	267.6	239.6	223.3
52.5°	358.6	347.0	344.6	327.5	320.5	297.9	276.2	259.8	239.6	214.7	201.5
55°	310.4	301.1	298.7	287.8	280.1	262.2	242.7	231.0	213.2	192.9	182.0
57.5°	269.2	261.4	259.0	249.7	245.0	230.3	218.6	205.4	189.8	173.5	164.1
60°	233.4	227.2	226.4	217.8	214.7	203.0	189.0	182.0	170.4	155.6	148.6
62.5°	201.5	198.4	197.6	191.4	189.0	178.9	168.0	163.4	152.5	140.0	133.8
65°	175.8	174.3	172.7	167.3	165.7	157.9	148.6	144.7	136.1	125.2	120.6
67.5°	154.0	152.5	151.7	147.0	145.5	140.0	133.0	128.4	122.1	112.8	108.9
70°	129.9	133.0	133.0	129.1	128.4	122.9	117.5	113.6	108.9	100.4	98.0
72.5°	118.2	115.9	115.9	112.8	112.0	108.9	102.7	100.4	96.5	89.5	87.1
75°	102.7	101.1	101.1	98.0	98.0	98.0	90.2	88.7	84.8	78.6	77.0
77.5°	88.7	87.1	87.1	84.8	84.8	82.5	77.8	77.0	75.5	68.5	67.7
80°	76.2	74.7	74.7	72.3	72.3	70.0	66.9	66.1	63.0	59.1	58.3
82.5°	63.8	63.0	63.0	61.5	61.5	59.1	56.8	56.0	53.7	50.6	49.0
85°	53.7	53.7	53.7	52.1	52.1	49.8	48.2	47.5	45.1	42.8	42.0
87.5°	45.9	45.9	45.1	43.6	44.3	42.8	40.5	40.5	38.9	36.6	35.8
90°	40.5	39.7	39.7	38.9	38.9	37.3	36.6	35.0	33.5	31.9	31.1
92.5°	36.6	36.6	36.6	35.0	34.2	31.9	29.6	27.2	24.9	22.6	21.8
95°	24.1	24.9	24.9	24.1	21.8	18.7	14.8	12.4	9.3	7.0	7.0
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	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):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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°	472.2	472.2	472.2	472.2	472.2	472.2	472.2	472.2	472.2	472.2	472.2
2.5°	497.9	497.9	501.0	483.9	483.9	482.3	476.1	472.2	460.5	458.2	454.3
5°	531.3	525.1	520.4	497.1	491.7	483.9	473.0	462.9	447.3	441.1	431.7
7.5°	557.8	543.0	533.7	504.9	492.4	480.0	462.9	449.6	429.4	419.3	408.4
10°	578.0	557.8	539.9	504.9	487.8	470.6	448.9	430.2	408.4	395.2	380.4
12.5°	589.7	560.9	538.3	497.1	466.0	453.5	429.4	408.4	384.3	370.3	354.0
15°	590.4	556.2	528.2	483.1	457.4	434.1	406.9	380.4	365.6	343.8	326.7
17.5°	582.7	543.8	511.9	463.6	435.6	409.2	382.0	358.6	334.5	318.2	301.1
20°	565.6	522.8	487.8	438.8	410.7	382.0	354.7	332.2	308.8	292.5	276.9
22.5°	538.3	496.3	459.8	410.7	383.5	355.5	329.1	305.7	283.9	268.4	253.6
25°	506.4	462.9	427.9	381.2	354.7	333.0	302.6	281.6	260.6	246.6	232.6
27.5°	469.1	427.9	394.4	350.1	326.0	301.1	276.2	258.3	238.8	226.4	213.9
30°	431.7	391.3	359.4	320.5	297.2	275.4	252.8	236.5	219.4	207.7	196.8
32.5°	396.0	358.6	329.1	293.3	272.3	252.0	232.6	217.8	203.0	192.9	183.6
35°	360.2	326.0	300.3	267.6	248.2	230.3	213.9	199.9	187.5	178.9	170.4
37.5°	329.1	297.2	273.1	245.0	227.9	211.6	197.6	185.1	173.5	165.7	157.9
40°	299.5	270.7	248.9	224.0	210.0	195.3	182.0	171.9	161.8	154.8	147.8
42.5°	272.3	247.4	227.9	205.4	192.1	181.3	168.8	159.5	150.1	144.7	139.2
45°	247.4	224.8	207.7	189.0	177.4	166.5	156.4	147.8	140.0	135.4	129.9
47.5°	224.0	204.6	191.4	174.3	164.1	154.0	144.7	137.7	131.5	126.8	122.1
50°	203.0	186.7	174.3	160.3	151.7	144.7	134.6	128.4	122.1	119.0	114.4
52.5°	184.4	169.6	159.5	146.3	139.2	132.2	125.2	119.8	113.6	111.2	107.4
55°	167.3	154.8	146.3	135.4	129.1	122.9	116.7	111.2	106.6	104.2	100.4
57.5°	151.7	140.8	133.8	123.7	118.2	113.6	107.4	103.5	98.8	96.5	94.1
60°	137.7	128.4	122.1	113.6	109.7	104.2	99.6	95.7	91.8	89.5	87.1
62.5°	125.2	116.7	111.2	104.2	100.4	95.7	91.8	88.7	84.8	83.2	80.9
65°	112.8	105.8	101.1	95.7	91.8	87.9	84.0	80.9	77.8	76.2	73.9
67.5°	101.9	96.5	92.6	87.1	83.2	80.9	77.0	74.7	71.6	70.0	67.7
70°	91.8	86.3	83.2	78.6	75.5	73.1	69.2	66.1	64.6	63.8	61.5
72.5°	81.7	77.0	73.9	70.0	67.7	65.3	62.2	59.9	58.3	59.1	55.2
75°	72.3	68.5	66.1	62.2	59.9	58.3	55.2	53.7	51.3	50.6	49.0
77.5°	63.0	59.9	57.6	54.5	52.9	50.6	48.2	46.7	44.3	44.3	42.0
80°	54.5	51.3	49.0	45.9	45.1	43.6	42.0	39.7	38.1	37.3	35.8
82.5°	46.7	44.3	42.0	39.7	38.1	36.6	35.0	33.5	31.9	31.1	29.6
85°	38.9	37.3	35.0	33.5	31.9	30.3	28.8	28.0	26.4	25.7	24.1
87.5°	33.5	31.9	30.3	28.8	27.2	25.7	24.1	23.3	21.8	21.8	20.2
90°	28.8	28.0	26.4	24.9	24.1	22.6	21.8	20.2	19.4	18.7	17.9
92.5°	21.8	22.6	21.8	21.8	21.8	21.0	20.2	19.4	18.7	17.9	17.1
95°	7.8	10.1	10.9	13.2	14.0	15.6	14.8	14.8	13.2	13.2	11.7
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P130231

CATALOG NUMBER: HL612ICAT - HLM6930 - HL6NFL - ERT702

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P130231

CATALOG NUMBER: HL612ICAT - HLM6930 - HL6NFL - ERT702

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	472.2	472.2	472.2	472.2	472.2	472.2	472.2	472.2	472.2	472.2	472.2
2.5°	447.3	448.9	447.3	442.6	439.5	435.6	434.1	428.6	431.7	426.3	429.4
5°	421.6	420.1	413.9	406.9	399.9	392.1	389.7	384.3	375.7	378.9	379.6
7.5°	393.6	389.0	380.4	371.8	364.8	355.5	351.6	343.1	342.3	337.6	337.6
10°	366.4	359.4	350.1	340.7	329.8	322.1	317.4	308.8	306.5	301.8	301.8
12.5°	338.4	329.8	319.7	310.4	300.3	290.9	286.3	278.5	275.4	271.5	269.2
15°	311.2	301.8	291.7	281.6	272.3	265.3	259.0	252.0	249.7	240.4	242.7
17.5°	285.5	277.7	266.8	257.5	248.9	241.2	235.7	229.5	226.4	222.5	221.7
20°	262.2	254.4	244.3	234.9	227.2	220.9	215.5	209.3	206.2	203.0	203.0
22.5°	239.6	232.6	224.0	215.5	213.2	202.3	197.6	191.4	190.6	186.7	185.9
25°	220.2	213.9	206.2	199.1	192.1	186.7	182.8	177.4	175.8	173.5	172.7
27.5°	203.0	196.8	190.6	184.4	178.1	174.3	169.6	165.7	164.1	161.8	161.0
30°	187.5	182.8	176.6	171.1	165.7	161.8	159.5	154.8	153.3	151.7	150.9
32.5°	175.0	170.4	164.9	161.0	155.6	152.5	150.1	146.3	144.7	143.1	143.1
35°	162.6	158.7	154.0	150.1	146.3	143.1	140.8	137.7	136.9	134.6	135.4
37.5°	151.7	148.6	144.7	141.6	137.7	135.4	133.0	129.9	129.1	128.4	128.4
40°	142.4	140.0	136.1	130.7	129.9	127.6	126.0	122.9	122.9	121.4	121.4
42.5°	133.8	131.5	128.4	126.0	122.9	121.4	119.8	117.5	116.7	115.1	115.9
45°	126.0	123.7	121.4	119.8	115.9	115.1	113.6	111.2	110.5	108.9	109.7
47.5°	118.2	116.7	115.1	112.8	110.5	108.9	107.4	105.0	105.0	103.5	104.2
50°	111.2	109.7	108.1	106.6	103.5	102.7	101.9	99.6	98.8	98.0	98.8
52.5°	104.2	103.5	101.9	100.4	98.0	97.2	95.7	94.1	93.4	92.6	93.4
55°	98.0	97.2	95.7	94.1	91.8	91.8	90.2	88.7	87.9	87.1	87.9
57.5°	91.0	91.0	89.5	88.7	86.3	85.6	84.8	82.5	82.5	81.7	82.5
60°	85.6	84.8	85.6	82.5	80.1	79.3	78.6	77.0	77.0	76.2	77.0
62.5°	78.6	78.6	77.8	77.0	74.7	74.7	73.1	71.6	71.6	70.8	71.6
65°	72.3	72.3	71.6	70.8	69.2	68.5	67.7	66.1	66.1	65.3	66.1
67.5°	66.9	66.1	65.3	64.6	63.0	63.0	61.5	60.7	59.9	59.9	60.7
70°	60.7	59.9	59.9	58.3	57.6	56.8	56.0	55.2	54.5	53.7	54.5
72.5°	54.5	53.7	53.7	52.9	51.3	50.6	49.8	49.0	49.0	48.2	49.0
75°	48.2	47.5	47.5	45.9	45.1	44.3	43.6	42.8	42.8	42.8	42.8
77.5°	41.2	41.2	40.5	39.7	38.9	38.1	38.1	37.3	36.6	36.6	37.3
80°	35.0	35.0	34.2	33.5	32.7	32.7	31.9	31.1	31.1	30.3	31.1
82.5°	28.8	28.8	28.0	28.0	26.4	27.2	26.4	25.7	25.7	25.7	25.7
85°	24.1	23.3	22.6	22.6	21.8	21.8	21.8	21.0	21.0	21.0	21.0
87.5°	19.4	19.4	18.7	18.7	17.9	17.9	17.9	17.9	17.1	17.1	17.9
90°	17.1	17.1	17.1	16.3	16.3	16.3	16.3	15.6	15.6	15.6	15.6
92.5°	16.3	15.6	14.8	14.0	12.4	12.4	12.4	13.2	13.2	14.0	14.8
95°	10.1	8.6	7.0	5.4	4.7	4.7	3.9	5.4	6.2	7.8	9.3
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P130231

CATALOG NUMBER: HL612ICAT - HLM6930 - HL6NFL - ERT702

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P130231

CATALOG NUMBER: HL612ICAT - HLM6930 - HL6NFL - ERT702

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	472.2	472.2	472.2	472.2
2.5°	431.7	423.2	418.5	430.2
5°	379.6	371.8	365.6	378.9
7.5°	336.1	331.4	325.2	331.4
10°	300.3	288.6	287.8	296.4
12.5°	268.4	262.2	258.3	266.1
15°	241.9	236.5	232.6	238.8
17.5°	220.9	216.3	211.6	216.3
20°	201.5	196.8	192.9	199.9
22.5°	185.1	182.0	177.4	182.0
25°	171.9	168.8	164.9	169.6
27.5°	161.0	157.9	154.8	158.7
30°	150.9	148.6	145.5	150.1
32.5°	142.4	137.7	137.7	141.6
35°	134.6	133.0	129.9	133.8
37.5°	127.6	126.0	123.7	126.8
40°	121.4	119.8	117.5	120.6
42.5°	114.4	114.4	111.2	114.4
45°	109.7	108.1	105.8	108.9
47.5°	104.2	102.7	100.4	103.5
50°	98.8	97.2	95.7	98.0
52.5°	93.4	92.6	89.5	92.6
55°	87.9	87.1	84.8	87.1
57.5°	82.5	81.7	79.3	81.7
60°	77.0	76.2	74.7	76.2
62.5°	71.6	70.8	69.2	70.8
65°	66.1	65.3	63.8	65.3
67.5°	59.9	59.9	58.3	59.9
70°	54.5	54.5	52.9	54.5
72.5°	49.0	49.0	47.5	49.0
75°	43.6	42.8	41.2	42.8
77.5°	37.3	36.6	36.6	36.6
80°	31.1	31.1	30.3	31.1
82.5°	25.7	25.7	24.9	25.7
85°	21.0	21.0	20.2	21.8
87.5°	17.9	17.9	17.1	17.1
90°	15.6	15.6	15.6	15.6
92.5°	14.8	14.8	14.8	14.8
95°	10.1	10.9	10.1	10.1
97.5°	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0



TEST NUMBER: P130231

CATALOG NUMBER: HL612ICAT - HLM6930 - HL6NFL - ERT702

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0

(END OF REPORT)