

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: P130052

Luminaire Tested: **HL618TAT - HLM6930 - HL6FL - 73PS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P130052
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33459)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HL618TAT - HLM6930 - HL6FL - 73PS
Description: HALO ALLSLOPE 6" 30W, Fresnel 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: 1508.6 lumens
Efficiency: N/A
Efficacy: 54.7 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 0.8 / 1.07
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')
CIE Type: Direct

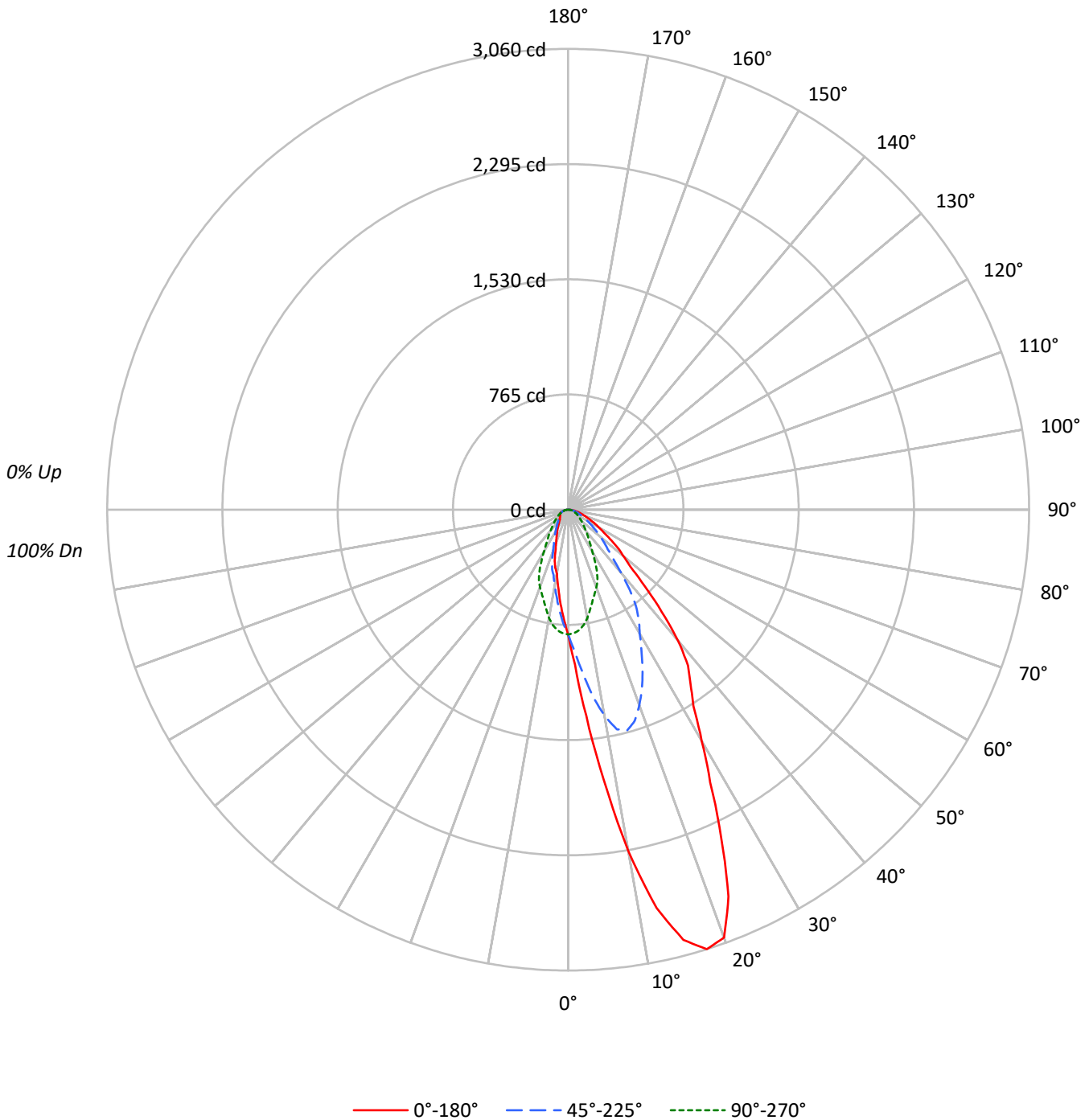
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P130052

CATALOG NUMBER: HL618TAT - HLM6930 - HL6FL - 73PS

Luminous Intensity Polar Plot





TEST NUMBER: P130052

CATALOG NUMBER: HL618TAT - HLM6930 - HL6FL - 73PS

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	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89					89			
2	103	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	80	79					79			
3	96	88	81	76	94	86	80	76	84	79	74	81	77	73	79	75	72	70					70			
4	90	80	73	68	88	79	72	67	77	71	66	74	70	65	72	68	65	63					63			
5	84	74	66	61	82	72	66	60	71	64	60	69	63	59	67	62	59	57					57			
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	53	52					52			
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47					47			
8	70	58	51	46	68	58	51	46	56	50	46	55	49	45	54	49	45	43					43			
9	66	54	47	42	65	54	47	42	53	46	42	52	46	42	51	45	42	40					40			
10	62	51	44	39	61	50	44	39	49	43	39	48	43	39	48	42	39	37					37			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	49454	49454	49454
5°	80434	47121	35720
10°	133515	42272	24989
15°	170592	36067	19903
20°	175155	31700	13466
25°	140963	26493	10396
30°	105932	19134	8211
35°	86984	14622	6580
40°	72291	11647	5581
45°	47753	9524	5195
50°	33564	7934	4881
55°	25461	6774	5220
60°	19278	6009	5044
65°	14692	5254	5155
70°	11349	4368	4913
75°	9020	3752	4261
80°	6225	3113	3263
85°	4411	2019	2205



TEST NUMBER: P130052

CATALOG NUMBER: HL618TAT - HLM6930 - HL6FL - 73PS

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.1	5.8
10°-20°	292.7	19.4
20°-30°	357.3	23.7
30°-40°	297.3	19.7
40°-50°	199.4	13.2
50°-60°	128.5	8.5
60°-70°	82.3	5.5
70°-80°	46.6	3.1
80°-90°	16.5	1.1
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°	738.1	48.9
0°-40°	1035.4	68.6
0°-60°	1363.3	90.4
0°-90°	1508.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1508.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	828	828	828	828	828	
5°	1374	1083	805	668	610	160
15°	2957	1516	625	410	345	817
25°	2406	1168	452	217	177	1096
35°	1416	785	238	132	107	891
45°	716	372	143	90	78	573
55°	338	202	90	69	69	309
65°	163	105	58	57	57	165
75°	78	51	32	36	37	81
85°	26	18	12	13	13	28
90°	0	0	0	0	0	



TEST NUMBER: P130052

CATALOG NUMBER: HL618TAT - HLM6930 - HL6FL - 73PS

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	828.5	828.5	828.5	828.5	828.5	828.5	828.5	828.5	828.5	828.5	828.5
2.5°	1029.7	1009.1	1011.3	1013.5	987.5	986.4	976.7	974.5	949.6	933.4	932.3
5°	1373.6	1326.0	1328.2	1307.7	1274.1	1243.8	1209.2	1178.9	1127.0	1082.7	1053.5
7.5°	1805.2	1732.7	1750.0	1707.8	1626.7	1571.6	1493.7	1421.2	1327.1	1246.0	1170.3
10°	2306.0	2224.8	2225.9	2166.4	2037.7	1925.2	1804.1	1689.5	1519.6	1388.8	1269.8
12.5°	2708.3	2651.0	2628.3	2554.7	2387.1	2275.7	2101.5	1904.7	1689.5	1493.7	1334.7
15°	2957.1	2890.0	2874.9	2792.7	2621.8	2474.7	2259.5	2018.3	1758.7	1516.4	1331.4
17.5°	3059.8	2992.8	2976.6	2877.0	2680.2	2507.1	2254.0	1986.9	1712.2	1469.9	1282.8
20°	3024.1	2910.6	2910.6	2780.8	2545.0	2349.2	2108.0	1845.2	1598.6	1380.1	1220.0
22.5°	2779.7	2710.5	2667.2	2528.8	2301.6	2131.8	1890.6	1676.5	1468.8	1280.6	1138.9
25°	2405.5	2334.1	2300.6	2185.9	1981.5	1854.9	1667.8	1482.9	1325.0	1168.1	1044.8
27.5°	2041.0	1981.5	1964.2	1876.6	1726.2	1612.7	1466.6	1321.7	1185.4	1052.4	950.7
30°	1772.7	1718.7	1707.8	1632.1	1506.7	1383.4	1293.6	1175.7	1065.4	949.6	864.2
32.5°	1545.6	1512.1	1494.8	1425.5	1327.1	1256.8	1167.0	1068.6	974.5	871.8	791.7
35°	1415.8	1376.9	1361.7	1305.5	1212.5	1149.7	1068.6	978.8	884.7	785.2	704.1
37.5°	1305.5	1269.8	1251.4	1199.5	1110.8	1039.4	958.3	865.3	769.0	671.7	596.0
40°	1134.6	1098.9	1091.3	1037.3	956.1	889.1	813.4	721.4	628.4	543.0	482.4
42.5°	917.2	894.5	886.9	852.3	772.3	717.1	644.6	571.1	509.4	441.3	392.6
45°	716.0	694.4	680.3	651.1	597.0	568.9	511.6	460.8	416.4	372.1	340.7
47.5°	559.2	551.6	550.5	526.7	488.9	467.3	427.2	391.5	356.9	322.3	295.3
50°	475.9	461.8	460.8	449.9	421.8	404.5	369.9	338.5	312.6	282.3	256.3
52.5°	415.3	404.5	399.1	382.9	353.7	341.8	312.6	288.8	266.1	240.1	220.6
55°	337.5	332.1	327.7	316.9	294.2	281.2	262.8	241.2	222.8	202.3	187.1
57.5°	279.1	272.6	271.5	263.9	246.6	238.0	222.8	203.3	189.3	172.0	159.0
60°	235.8	230.4	227.1	220.6	206.6	200.1	188.2	172.0	161.2	144.9	136.3
62.5°	196.9	192.5	189.3	183.9	174.1	167.6	159.0	147.1	136.3	124.4	115.7
65°	163.3	160.1	157.9	153.6	144.9	140.6	133.0	124.4	114.6	104.9	98.4
67.5°	135.2	134.1	133.0	127.6	121.1	119.0	111.4	103.8	97.3	88.7	82.2
70°	112.5	111.4	110.3	107.1	101.7	98.4	93.0	86.5	81.1	73.5	69.2
72.5°	90.9	90.9	89.8	87.6	82.2	80.0	74.6	70.3	66.0	60.6	57.3
75°	77.9	76.8	75.7	72.5	69.2	67.1	63.8	59.5	55.2	50.8	47.6
77.5°	60.6	59.5	59.5	58.4	55.2	54.1	50.8	47.6	45.4	43.3	41.1
80°	45.4	44.3	44.3	43.3	41.1	40.0	38.9	35.7	34.6	31.4	30.3
82.5°	38.9	37.9	36.8	35.7	33.5	33.5	30.3	28.1	26.0	23.8	22.7
85°	26.0	24.9	24.9	24.9	23.8	23.8	21.6	20.6	20.6	18.4	17.3
87.5°	16.2	15.1	15.1	15.1	14.1	14.1	14.1	11.9	11.9	10.8	10.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P130052

CATALOG NUMBER: HL618TAT - HLM6930 - HL6FL - 73PS

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	828.5	828.5	828.5	828.5	828.5	828.5	828.5	828.5	828.5	828.5	828.5
2.5°	919.4	906.4	894.5	881.5	862.0	861.0	837.2	820.9	804.7	812.3	789.6
5°	1021.0	986.4	955.1	924.8	890.2	871.8	833.9	804.7	778.8	776.6	747.4
7.5°	1098.9	1038.3	988.6	943.2	892.3	864.2	815.5	774.4	739.8	726.8	690.1
10°	1159.5	1069.7	997.2	936.7	873.9	833.9	772.3	730.1	686.8	668.4	628.4
12.5°	1186.5	1070.8	985.3	919.4	839.3	791.7	730.1	674.9	630.6	611.1	575.4
15°	1175.7	1050.2	961.5	883.7	802.5	743.1	676.0	625.2	593.8	563.5	525.7
17.5°	1136.8	1012.4	921.5	838.2	756.0	698.7	634.9	584.1	543.0	520.2	483.5
20°	1078.4	966.9	873.9	792.8	710.6	657.6	591.6	547.3	506.2	480.2	437.0
22.5°	1011.3	902.1	815.5	739.8	661.9	612.2	555.9	508.4	460.8	435.9	388.3
25°	922.6	831.7	751.7	682.5	612.2	564.6	500.8	452.1	399.1	369.9	325.6
27.5°	848.0	762.5	692.2	628.4	554.9	501.9	435.9	384.0	336.4	308.3	273.6
30°	777.7	698.7	619.8	557.0	481.3	424.0	367.7	320.2	281.2	262.8	239.0
32.5°	711.7	620.8	548.4	478.1	406.7	351.5	307.2	273.6	245.5	231.5	210.9
35°	615.4	526.7	462.9	393.7	334.2	299.6	263.9	238.0	215.2	202.3	185.0
37.5°	507.3	434.8	369.9	324.5	284.5	260.7	230.4	207.7	188.2	178.5	164.4
40°	407.8	353.7	311.5	281.2	249.8	227.1	200.1	182.8	167.6	157.9	146.0
42.5°	346.1	308.3	271.5	245.5	217.4	199.0	177.4	160.1	147.1	139.5	128.7
45°	302.8	272.6	241.2	217.4	192.5	176.3	156.8	142.8	132.0	124.4	115.7
47.5°	263.9	236.9	214.2	191.4	169.8	156.8	139.5	126.5	115.7	111.4	102.8
50°	231.5	206.6	185.0	166.6	149.3	137.4	123.3	112.5	104.9	101.7	95.2
52.5°	199.0	178.5	160.1	146.0	130.9	121.1	109.2	100.6	95.2	91.9	87.6
55°	167.6	152.5	137.4	125.5	113.6	107.1	97.3	89.8	85.4	84.4	79.0
57.5°	143.9	129.8	120.1	109.2	100.6	94.1	86.5	82.2	77.9	76.8	73.5
60°	123.3	111.4	102.8	95.2	87.6	83.3	77.9	73.5	69.2	69.2	67.1
62.5°	104.9	95.2	88.7	82.2	75.7	72.5	68.1	64.9	62.7	62.7	61.7
65°	90.9	81.1	75.7	71.4	67.1	64.9	60.6	58.4	56.2	56.2	55.2
67.5°	76.8	69.2	64.9	61.7	57.3	55.2	51.9	50.8	49.8	48.7	47.6
70°	64.9	59.5	55.2	51.9	48.7	47.6	44.3	43.3	42.2	43.3	42.2
72.5°	54.1	49.8	46.5	44.3	42.2	41.1	38.9	37.9	36.8	36.8	36.8
75°	44.3	41.1	38.9	36.8	35.7	34.6	33.5	32.4	31.4	32.4	31.4
77.5°	37.9	34.6	32.4	31.4	30.3	29.2	28.1	28.1	27.0	27.0	27.0
80°	29.2	27.0	26.0	23.8	23.8	22.7	22.7	22.7	21.6	22.7	22.7
82.5°	21.6	19.5	18.4	18.4	17.3	17.3	17.3	17.3	16.2	17.3	17.3
85°	16.2	15.1	14.1	13.0	13.0	13.0	13.0	11.9	11.9	11.9	11.9
87.5°	9.7	8.7	7.6	7.6	6.5	7.6	6.5	6.5	6.5	6.5	6.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P130052

CATALOG NUMBER: HL618TAT - HLM6930 - HL6FL - 73PS

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	828.5	828.5	828.5	828.5	828.5	828.5	828.5	828.5	828.5	828.5	828.5
2.5°	775.5	769.0	769.0	744.1	739.8	755.0	737.6	724.7	732.2	722.5	726.8
5°	725.8	712.8	703.0	678.2	669.5	668.4	651.1	631.7	631.7	626.2	625.2
7.5°	661.9	642.5	627.3	601.4	589.5	585.1	565.7	545.1	543.0	533.2	530.0
10°	594.9	577.6	557.0	531.1	518.1	508.4	484.6	469.4	461.8	452.1	447.8
12.5°	536.5	519.2	498.6	467.3	453.2	447.8	428.3	417.5	415.3	408.8	406.7
15°	492.1	467.3	448.9	424.0	413.2	409.9	391.5	379.6	374.2	365.6	356.9
17.5°	451.0	425.1	408.8	384.0	369.9	356.9	334.2	318.0	303.9	299.6	292.0
20°	406.7	378.6	352.6	325.6	306.1	293.1	271.5	259.6	256.3	248.8	243.4
22.5°	341.8	322.3	294.2	270.4	255.3	248.8	235.8	226.1	222.8	216.3	213.1
25°	292.0	268.2	250.9	235.8	222.8	217.4	205.5	197.9	194.7	189.3	187.1
27.5°	250.9	233.6	220.6	206.6	195.8	191.4	181.7	174.1	170.9	165.5	163.3
30°	218.5	205.5	194.7	180.6	173.1	167.6	160.1	152.5	150.3	147.1	143.9
32.5°	193.6	182.8	172.0	160.1	152.5	148.2	141.7	135.2	133.0	129.8	127.6
35°	172.0	161.2	152.5	139.5	135.2	132.0	125.5	119.0	117.9	114.6	112.5
37.5°	151.4	143.9	135.2	125.5	120.1	117.9	112.5	107.1	106.0	102.8	101.7
40°	134.1	127.6	121.1	110.3	108.2	107.1	101.7	96.3	96.3	94.1	93.0
42.5°	119.0	114.6	108.2	102.8	98.4	97.3	93.0	89.8	89.8	87.6	86.5
45°	107.1	103.8	99.5	94.1	90.9	89.8	86.5	83.3	83.3	82.2	82.2
47.5°	98.4	94.1	90.9	86.5	83.3	83.3	80.0	77.9	77.9	76.8	76.8
50°	89.8	87.6	84.4	81.1	77.9	77.9	74.6	72.5	73.5	73.5	72.5
52.5°	82.2	81.1	79.0	75.7	73.5	73.5	71.4	69.2	70.3	69.2	69.2
55°	75.7	75.7	73.5	71.4	69.2	69.2	67.1	66.0	67.1	68.1	68.1
57.5°	71.4	70.3	69.2	67.1	67.1	67.1	66.0	64.9	66.0	66.0	66.0
60°	64.9	66.0	64.9	63.8	62.7	63.8	62.7	60.6	61.7	61.7	62.7
62.5°	59.5	60.6	60.6	60.6	60.6	60.6	60.6	59.5	61.7	62.7	62.7
65°	54.1	55.2	55.2	55.2	55.2	57.3	56.2	55.2	56.2	57.3	57.3
67.5°	47.6	48.7	48.7	48.7	48.7	49.8	49.8	48.7	49.8	50.8	51.9
70°	41.1	43.3	43.3	43.3	44.3	45.4	45.4	44.3	46.5	47.6	49.8
72.5°	35.7	36.8	37.9	37.9	38.9	41.1	41.1	41.1	42.2	42.2	42.2
75°	31.4	32.4	32.4	33.5	33.5	35.7	35.7	35.7	36.8	36.8	36.8
77.5°	27.0	27.0	28.1	28.1	29.2	30.3	30.3	30.3	31.4	31.4	31.4
80°	21.6	22.7	22.7	23.8	23.8	23.8	23.8	23.8	24.9	24.9	26.0
82.5°	16.2	17.3	17.3	18.4	18.4	18.4	18.4	18.4	19.5	19.5	19.5
85°	11.9	11.9	11.9	13.0	11.9	13.0	13.0	13.0	13.0	13.0	13.0
87.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	5.4	6.5	5.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P130052

CATALOG NUMBER: HL618TAT - HLM6930 - HL6FL - 73PS

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	828.5	828.5	828.5	828.5
2.5°	724.7	718.2	712.8	713.9
5°	621.9	607.9	615.4	610.0
7.5°	527.8	520.2	515.9	511.6
10°	443.5	430.5	433.7	431.6
12.5°	401.3	396.9	396.9	394.8
15°	354.8	348.3	346.1	345.0
17.5°	282.3	278.0	276.9	275.8
20°	241.2	235.8	233.6	232.5
22.5°	209.8	205.5	204.4	202.3
25°	185.0	179.5	179.5	177.4
27.5°	160.1	157.9	156.8	155.8
30°	142.8	139.5	138.4	137.4
32.5°	128.7	123.3	122.2	121.1
35°	110.3	109.2	107.1	107.1
37.5°	100.6	98.4	98.4	97.3
40°	91.9	89.8	88.7	87.6
42.5°	86.5	84.4	83.3	83.3
45°	81.1	80.0	79.0	77.9
47.5°	76.8	75.7	74.6	73.5
50°	72.5	71.4	71.4	69.2
52.5°	70.3	70.3	70.3	69.2
55°	69.2	69.2	70.3	69.2
57.5°	66.0	66.0	64.9	63.8
60°	63.8	63.8	63.8	61.7
62.5°	62.7	61.7	62.7	61.7
65°	57.3	57.3	58.4	57.3
67.5°	54.1	54.1	54.1	53.0
70°	49.8	49.8	48.7	48.7
72.5°	43.3	43.3	43.3	43.3
75°	36.8	36.8	36.8	36.8
77.5°	31.4	30.3	30.3	30.3
80°	24.9	23.8	23.8	23.8
82.5°	19.5	19.5	19.5	18.4
85°	13.0	13.0	13.0	13.0
87.5°	5.4	5.4	5.4	5.4
90°	0.0	0.0	0.0	0.0

(END OF REPORT)