

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: P130038

Luminaire Tested: **HL618TAT - HLM6927 - HL6FL - 456W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P130038
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33452)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HL618TAT - HLM6927 - HL6FL - 456W
Description: HALO ALLSLOPE 6" 30W, White Coilex Baffle, White Metal Trim Ring using 40 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: 1908.0 lumens
Efficiency: N/A
Efficacy: 69.1 lumens/watt
Spacing Criteria (0/90/45): 1.64 / 0.67 / 1.09
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')
CIE Type: Direct

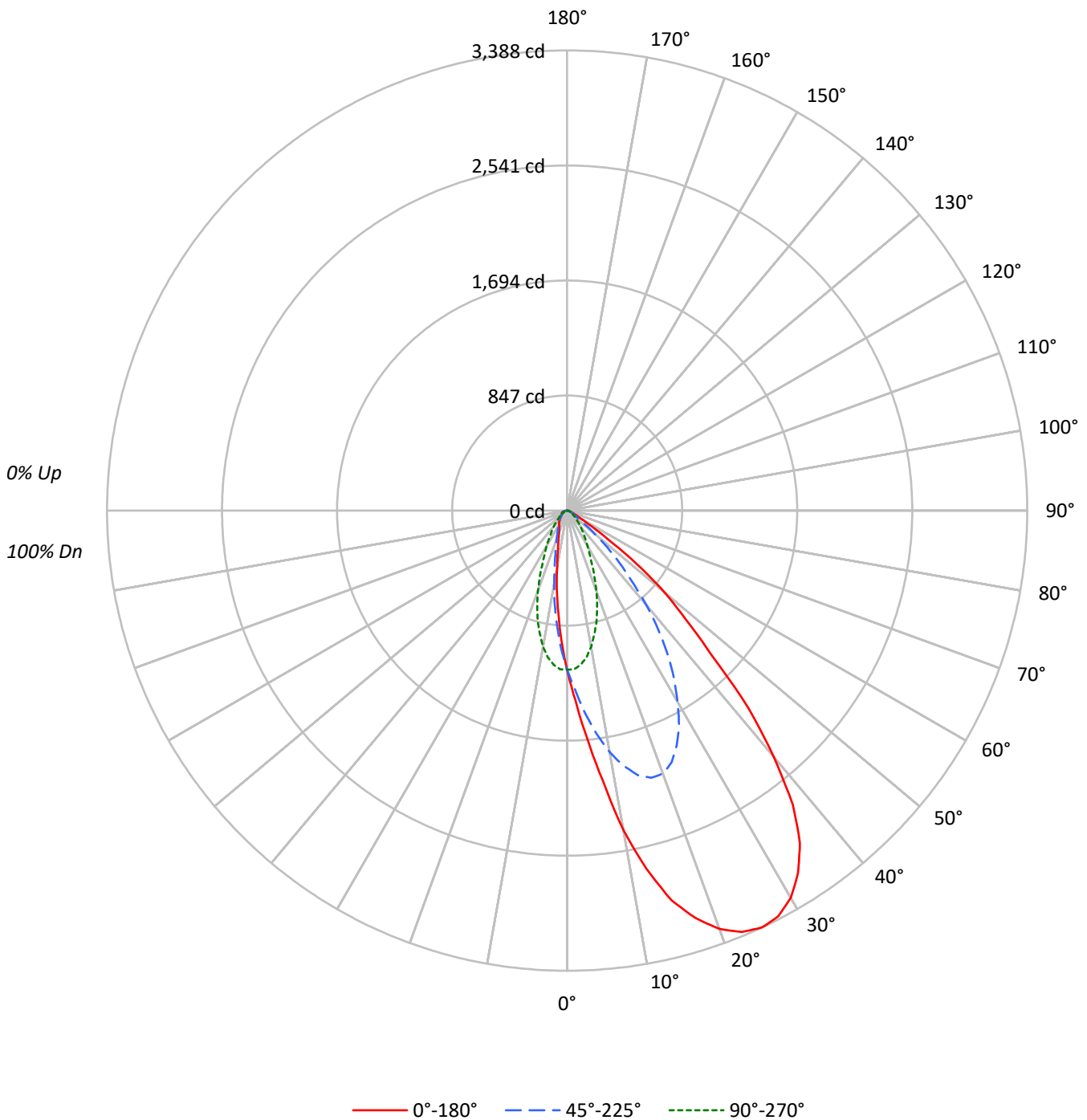
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P130038

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 456W

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	102	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	80	74	70	77	73	69	75	72	68	67					67			
5	86	76	69	64	85	75	69	64	73	68	63	72	67	63	70	66	62	60					60			
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55					55			
7	76	65	58	53	75	64	58	53	63	57	52	62	56	52	60	56	52	50					50			
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46					46			
9	67	56	49	45	66	56	49	44	55	48	44	54	48	44	53	48	44	42					42			
10	64	52	46	41	62	52	45	41	51	45	41	50	45	41	49	44	41	39					39			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	69880	69880	69880
5°	98412	66738	43965
10°	138401	58924	24370
15°	171353	48274	14532
20°	189873	36304	10078
25°	198550	25017	7970
30°	196733	17921	7051
35°	183533	12957	6267
40°	150583	9876	5288
45°	99814	7070	4468
50°	66141	5360	3879
55°	27075	4300	3621
60°	8666	3434	3761
65°	5218	2699	3779
70°	3026	2421	3632
75°	1505	2200	3242
80°	1097	1783	2605
85°	679	1187	1527



TEST NUMBER: P130038

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 456W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.2	5.9
10°-20°	339.7	17.8
20°-30°	498.1	26.1
30°-40°	488.9	25.6
40°-50°	298.1	15.6
50°-60°	102.4	5.4
60°-70°	39.5	2.1
70°-80°	20.9	1.1
80°-90°	7.3	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°	951.0	49.8
0°-40°	1439.9	75.5
0°-60°	1840.4	96.5
0°-90°	1908.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1908.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1171	1171	1171	1171	1171	
5°	1681	1493	1140	849	751	182
15°	2970	2016	837	334	252	839
25°	3388	1908	427	165	136	1551
35°	2987	1289	211	113	102	1828
45°	1497	548	106	72	67	1206
55°	359	93	57	47	48	376
65°	58	40	30	37	42	61
75°	13	13	19	25	28	16
85°	4	5	7	9	9	4
90°	0	0	0	0	0	



TEST NUMBER: P130038

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 456W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1170.7	1170.7	1170.7	1170.7	1170.7	1170.7	1170.7	1170.7	1170.7	1170.7	1170.7
2.5°	1399.7	1386.7	1387.7	1379.7	1384.7	1393.7	1383.7	1354.7	1336.7	1318.7	1307.7
5°	1680.6	1677.6	1681.6	1656.6	1649.6	1647.6	1615.6	1572.6	1565.6	1492.6	1486.6
7.5°	2003.5	1993.5	1988.5	1943.5	1928.5	1904.5	1854.5	1786.6	1723.6	1657.6	1596.6
10°	2390.4	2359.4	2344.4	2289.4	2252.4	2196.5	2117.5	2001.5	1895.5	1805.6	1708.6
12.5°	2700.3	2678.3	2668.3	2607.4	2563.4	2470.4	2365.4	2207.5	2066.5	1925.5	1797.6
15°	2970.3	2937.3	2918.3	2852.3	2795.3	2706.3	2581.4	2394.4	2201.5	2016.5	1847.5
17.5°	3146.2	3121.2	3100.2	3038.3	2974.3	2870.3	2729.3	2511.4	2289.4	2062.5	1860.5
20°	3278.2	3250.2	3219.2	3155.2	3083.2	2972.3	2808.3	2573.4	2321.4	2061.5	1834.5
22.5°	3358.2	3318.2	3293.2	3217.2	3145.2	3021.3	2843.3	2575.4	2295.4	2007.5	1769.6
25°	3388.2	3349.2	3316.2	3233.2	3151.2	3011.3	2814.3	2515.4	2200.5	1907.5	1675.6
27.5°	3367.2	3325.2	3287.2	3202.2	3107.2	2942.3	2714.3	2385.4	2062.5	1784.6	1548.6
30°	3292.2	3253.2	3207.2	3120.2	3009.3	2814.3	2550.4	2199.5	1884.5	1625.6	1395.7
32.5°	3164.2	3129.2	3073.2	2977.3	2832.3	2607.4	2322.4	1974.5	1738.6	1462.6	1236.7
35°	2987.3	2944.3	2868.3	2756.3	2574.4	2317.4	2043.5	1756.6	1518.6	1288.7	1067.7
37.5°	2729.3	2672.3	2615.4	2446.4	2247.4	2015.5	1780.6	1548.6	1300.7	1099.7	899.8
40°	2363.4	2314.4	2250.4	2070.5	1914.5	1727.6	1520.6	1303.7	1106.7	903.8	726.8
42.5°	1980.5	1903.5	1853.5	1723.6	1595.6	1410.7	1209.7	1017.7	857.8	700.8	560.9
45°	1496.6	1472.6	1419.7	1323.7	1227.7	1093.7	963.8	806.8	670.8	547.9	430.9
47.5°	1180.7	1158.7	1118.7	1047.7	978.8	866.8	753.8	629.8	514.9	398.9	313.9
50°	937.8	902.8	867.8	807.8	739.8	655.8	561.9	447.9	333.9	257.9	210.9
52.5°	642.8	618.8	592.9	544.9	489.9	424.9	333.9	250.9	190.0	149.0	124.0
55°	358.9	355.9	327.9	294.9	244.9	207.9	159.0	127.0	106.0	93.0	83.0
57.5°	184.0	180.0	160.0	142.0	125.0	107.0	94.0	85.0	79.0	73.0	70.0
60°	106.0	102.0	97.0	93.0	86.0	80.0	74.0	69.0	66.0	61.0	58.0
62.5°	76.0	76.0	73.0	70.0	67.0	63.0	59.0	56.0	54.0	50.0	48.0
65°	58.0	58.0	56.0	54.0	52.0	50.0	47.0	44.0	43.0	40.0	38.0
67.5°	44.0	43.0	42.0	41.0	39.0	38.0	35.0	33.0	32.0	30.0	29.0
70°	30.0	30.0	29.0	29.0	29.0	27.0	25.0	24.0	23.0	22.0	22.0
72.5°	19.0	19.0	19.0	19.0	18.0	17.0	17.0	17.0	17.0	16.0	16.0
75°	13.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	13.0	13.0	13.0
77.5°	9.0	9.0	9.0	9.0	9.0	10.0	10.0	10.0	11.0	11.0	12.0
80°	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	9.0	9.0	10.0
82.5°	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	8.0
85°	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
87.5°	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0
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: P130038

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 456W

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1170.7	1170.7	1170.7	1170.7	1170.7	1170.7	1170.7	1170.7	1170.7	1170.7	1170.7
2.5°	1298.7	1289.7	1253.7	1240.7	1236.7	1190.7	1197.7	1169.7	1145.7	1124.7	1106.7
5°	1431.6	1403.7	1336.7	1301.7	1273.7	1203.7	1186.7	1139.7	1095.7	1058.7	1019.7
7.5°	1545.6	1488.6	1395.7	1338.7	1285.7	1191.7	1153.7	1088.7	1025.7	973.8	921.8
10°	1628.6	1543.6	1427.6	1348.7	1271.7	1153.7	1096.7	1017.7	934.8	874.8	814.8
12.5°	1684.6	1574.6	1431.6	1324.7	1228.7	1094.7	1024.7	927.8	841.8	773.8	698.8
15°	1703.6	1568.6	1404.7	1278.7	1163.7	1025.7	938.8	836.8	741.8	660.8	592.9
17.5°	1689.6	1531.6	1347.7	1208.7	1080.7	932.8	839.8	731.8	635.8	560.9	483.9
20°	1640.6	1465.6	1270.7	1119.7	983.8	834.8	734.8	626.8	532.9	455.9	391.9
22.5°	1562.6	1375.7	1171.7	1013.8	879.8	731.8	626.8	523.9	434.9	373.9	325.9
25°	1456.6	1266.7	1057.7	903.8	768.8	616.8	520.9	426.9	358.9	311.9	273.9
27.5°	1327.7	1136.7	938.8	790.8	656.8	517.9	426.9	355.9	300.9	264.9	231.9
30°	1185.7	1002.8	814.8	667.8	546.9	420.9	353.9	299.9	255.9	224.9	200.0
32.5°	1034.7	868.8	690.8	552.9	439.9	348.9	295.9	252.9	216.9	193.0	173.0
35°	881.8	727.8	567.9	442.9	356.9	289.9	245.9	210.9	186.0	166.0	151.0
37.5°	738.8	590.9	444.9	351.9	287.9	235.9	204.9	179.0	160.0	145.0	133.0
40°	575.9	449.9	340.9	279.9	235.9	196.0	175.0	155.0	139.0	127.0	118.0
42.5°	437.9	345.9	276.9	228.9	194.0	165.0	148.0	131.0	119.0	107.0	100.0
45°	331.9	270.9	221.9	181.0	159.0	134.0	119.0	106.0	97.0	91.0	86.0
47.5°	247.9	202.0	164.0	135.0	120.0	101.0	93.0	86.0	82.0	80.0	76.0
50°	167.0	135.0	111.0	97.0	90.0	81.0	79.0	76.0	72.0	69.0	66.0
52.5°	104.0	91.0	82.0	78.0	76.0	73.0	69.0	66.0	62.0	61.0	59.0
55°	78.0	75.0	70.0	67.0	65.0	60.0	58.0	57.0	55.0	54.0	52.0
57.5°	66.0	63.0	59.0	56.0	55.0	52.0	51.0	48.0	47.0	46.0	45.0
60°	55.0	53.0	50.0	48.0	47.0	44.0	43.0	42.0	41.0	40.0	39.0
62.5°	45.0	44.0	41.0	40.0	39.0	37.0	36.0	36.0	35.0	35.0	34.0
65°	36.0	35.0	33.0	32.0	31.0	30.0	31.0	30.0	30.0	31.0	31.0
67.5°	28.0	28.0	26.0	26.0	26.0	25.0	26.0	26.0	27.0	28.0	29.0
70°	21.0	21.0	21.0	21.0	22.0	22.0	23.0	24.0	25.0	26.0	27.0
72.5°	16.0	17.0	17.0	18.0	19.0	19.0	21.0	21.0	22.0	23.0	24.0
75°	14.0	15.0	15.0	16.0	17.0	17.0	18.0	19.0	20.0	20.0	21.0
77.5°	12.0	13.0	13.0	14.0	15.0	15.0	16.0	16.0	17.0	18.0	18.0
80°	10.0	10.0	11.0	11.0	12.0	12.0	13.0	13.0	13.0	14.0	14.0
82.5°	8.0	8.0	8.0	9.0	9.0	9.0	10.0	10.0	10.0	11.0	11.0
85°	5.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0
87.5°	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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: P130038

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 456W

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1170.7	1170.7	1170.7	1170.7	1170.7	1170.7	1170.7	1170.7	1170.7	1170.7	1170.7
2.5°	1090.7	1082.7	1059.7	1048.7	1033.7	1015.7	1004.8	1003.8	1008.8	974.8	967.8
5°	990.8	963.8	924.8	902.8	869.8	848.8	830.8	822.8	808.8	790.8	769.8
7.5°	879.8	838.8	796.8	758.8	728.8	695.8	672.8	649.8	639.8	615.8	599.9
10°	763.8	716.8	664.8	620.8	585.9	546.9	521.9	499.9	482.9	461.9	444.9
12.5°	641.8	591.9	529.9	488.9	453.9	421.9	395.9	382.9	368.9	356.9	338.9
15°	528.9	472.9	423.9	386.9	359.9	333.9	317.9	304.9	290.9	278.9	270.9
17.5°	424.9	380.9	342.9	313.9	291.9	270.9	256.9	245.9	237.9	223.9	219.9
20°	348.9	312.9	284.9	260.9	239.9	223.9	211.9	205.9	200.0	189.0	184.0
22.5°	290.9	263.9	237.9	217.9	205.9	192.0	182.0	176.0	171.0	163.0	161.0
25°	243.9	223.9	202.9	189.0	176.0	165.0	159.0	154.0	150.0	144.0	142.0
27.5°	209.9	193.0	176.0	164.0	155.0	147.0	139.0	138.0	137.0	131.0	130.0
30°	181.0	168.0	155.0	146.0	139.0	133.0	129.0	125.0	126.0	122.0	121.0
32.5°	159.0	149.0	139.0	131.0	127.0	122.0	119.0	119.0	118.0	114.0	114.0
35°	140.0	133.0	126.0	120.0	117.0	113.0	110.0	109.0	109.0	104.0	104.0
37.5°	126.0	119.0	113.0	109.0	106.0	101.0	99.0	98.0	97.0	94.0	94.0
40°	110.0	105.0	100.0	96.0	93.0	90.0	88.0	88.0	88.0	85.0	85.0
42.5°	94.0	91.0	88.0	85.0	84.0	81.0	79.0	79.0	79.0	75.0	76.0
45°	83.0	82.0	79.0	76.0	74.0	72.0	70.0	71.0	71.0	68.0	69.0
47.5°	74.0	72.0	69.0	67.0	66.0	65.0	64.0	64.0	64.0	62.0	62.0
50°	65.0	63.0	62.0	61.0	60.0	59.0	57.0	57.0	57.0	56.0	56.0
52.5°	58.0	57.0	55.0	54.0	54.0	52.0	52.0	50.0	52.0	50.0	51.0
55°	51.0	50.0	49.0	48.0	48.0	47.0	47.0	47.0	47.0	47.0	48.0
57.5°	44.0	44.0	43.0	43.0	43.0	42.0	43.0	44.0	45.0	44.0	46.0
60°	39.0	39.0	38.0	39.0	40.0	40.0	41.0	42.0	44.0	44.0	45.0
62.5°	34.0	36.0	36.0	37.0	38.0	39.0	40.0	41.0	43.0	42.0	44.0
65°	32.0	33.0	34.0	35.0	37.0	37.0	38.0	39.0	40.0	40.0	42.0
67.5°	30.0	32.0	32.0	33.0	34.0	34.0	36.0	37.0	38.0	38.0	39.0
70°	28.0	29.0	30.0	31.0	32.0	32.0	33.0	34.0	35.0	34.0	35.0
72.5°	25.0	26.0	27.0	27.0	28.0	28.0	29.0	30.0	31.0	31.0	32.0
75°	22.0	23.0	23.0	24.0	25.0	25.0	26.0	26.0	27.0	27.0	28.0
77.5°	19.0	19.0	20.0	20.0	21.0	21.0	22.0	22.0	23.0	23.0	23.0
80°	15.0	16.0	16.0	16.0	17.0	17.0	17.0	18.0	18.0	18.0	19.0
82.5°	11.0	12.0	12.0	12.0	13.0	13.0	13.0	13.0	14.0	14.0	14.0
85°	8.0	8.0	8.0	8.0	8.0	9.0	9.0	9.0	9.0	9.0	9.0
87.5°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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: P130038

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 456W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1170.7	1170.7	1170.7	1170.7
2.5°	976.8	971.8	957.8	954.8
5°	773.8	763.8	753.8	750.8
7.5°	600.9	587.9	573.9	580.9
10°	431.9	429.9	422.9	420.9
12.5°	329.9	327.9	321.9	315.9
15°	261.9	261.9	256.9	251.9
17.5°	210.9	212.9	206.9	203.9
20°	179.0	178.0	176.0	174.0
22.5°	156.0	156.0	155.0	151.0
25°	138.0	139.0	138.0	136.0
27.5°	127.0	128.0	127.0	126.0
30°	119.0	119.0	118.0	118.0
32.5°	112.0	112.0	112.0	111.0
35°	102.0	103.0	102.0	102.0
37.5°	92.0	92.0	92.0	92.0
40°	83.0	84.0	84.0	83.0
42.5°	74.0	74.0	74.0	73.0
45°	67.0	68.0	67.0	67.0
47.5°	61.0	61.0	61.0	60.0
50°	55.0	55.0	55.0	55.0
52.5°	50.0	50.0	51.0	50.0
55°	47.0	48.0	48.0	48.0
57.5°	46.0	46.0	47.0	47.0
60°	45.0	45.0	46.0	46.0
62.5°	43.0	45.0	44.0	44.0
65°	41.0	41.0	42.0	42.0
67.5°	38.0	39.0	39.0	39.0
70°	35.0	35.0	36.0	36.0
72.5°	31.0	32.0	32.0	32.0
75°	27.0	28.0	28.0	28.0
77.5°	23.0	23.0	24.0	24.0
80°	19.0	19.0	19.0	19.0
82.5°	14.0	14.0	14.0	14.0
85°	9.0	9.0	9.0	9.0
87.5°	4.0	4.0	4.0	4.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)