

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: P130039

Luminaire Tested: **HL618TAT - HLM6930 - HL6FL - 456W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P130039
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 - HLM6930 - 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 / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2063.4 lumens
Efficiency: N/A
Efficacy: 74.8 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

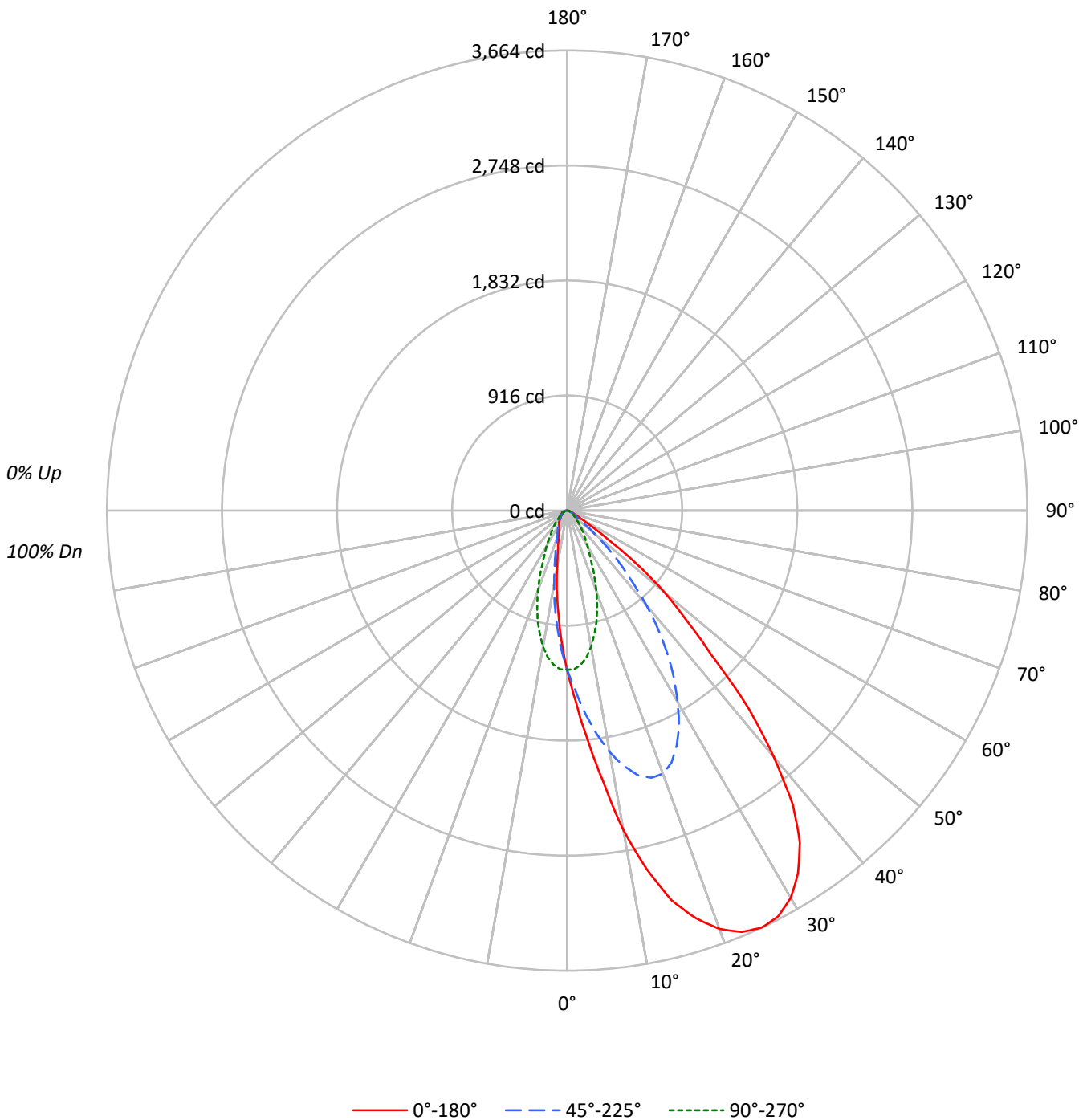
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P130039

CATALOG NUMBER: HL618TAT - HLM6930 - HL6FL - 456W

Luminous Intensity Polar Plot





TEST NUMBER: P130039

CATALOG NUMBER: HL618TAT - HLM6930 - HL6FL - 456W

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	112	109	106	103	110	107	104	102	103	100	98	99	97	95	95	94	93	91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	84	82
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74
4	92	83	76	71	90	82	76	71	80	74	70	77	73	69	75	72	68	67
5	86	76	69	64	85	75	69	64	73	68	63	72	67	63	70	66	62	60
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55
7	76	65	58	53	75	64	58	53	63	57	52	62	56	52	60	56	52	50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46
9	67	56	49	45	66	56	49	44	55	48	44	54	48	44	53	48	44	42
10	64	52	46	41	62	52	45	41	51	45	41	50	45	41	49	44	41	39

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	75568	75568	75568
5°	106422	72172	47549
10°	149674	63723	26356
15°	185303	52203	15720
20°	205332	39264	10895
25°	214718	27056	8614
30°	212754	19379	7625
35°	198475	14014	6777
40°	162848	10679	5715
45°	107944	7643	4829
50°	71522	5797	4196
55°	29278	4647	3915
60°	9369	3712	4063
65°	5641	2915	4085
70°	3268	2613	3924
75°	1633	2374	3509
80°	1179	1933	2811
85°	729	1289	1646



TEST NUMBER: P130039

CATALOG NUMBER: HL618TAT - HLM6930 - HL6FL - 456W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.4	5.9
10°-20°	367.4	17.8
20°-30°	538.7	26.1
30°-40°	528.7	25.6
40°-50°	322.4	15.6
50°-60°	110.7	5.4
60°-70°	42.7	2.1
70°-80°	22.6	1.1
80°-90°	7.9	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°	1028.4	49.8
0°-40°	1557.2	75.5
0°-60°	1990.3	96.5
0°-90°	2063.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2063.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1266	1266	1266	1266	1266	
5°	1817	1614	1232	918	812	197
15°	3212	2181	905	361	272	907
25°	3664	2063	462	178	147	1677
35°	3230	1394	228	122	110	1977
45°	1618	592	115	78	72	1304
55°	388	100	62	51	52	406
65°	63	43	32	40	45	66
75°	14	14	20	27	30	17
85°	4	5	8	10	10	5
90°	0	0	0	0	0	



TEST NUMBER: P130039

CATALOG NUMBER: HL618TAT - HLM6930 - HL6FL - 456W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1266.0	1266.0	1266.0	1266.0	1266.0	1266.0	1266.0	1266.0	1266.0	1266.0	1266.0
2.5°	1513.6	1499.6	1500.6	1492.0	1497.4	1507.1	1496.3	1465.0	1445.5	1426.0	1414.2
5°	1817.4	1814.2	1818.5	1791.5	1783.9	1781.8	1747.2	1700.7	1693.1	1614.2	1607.7
7.5°	2166.6	2155.8	2150.4	2101.8	2085.6	2059.6	2005.6	1932.0	1863.9	1792.6	1726.6
10°	2585.1	2551.5	2535.3	2475.9	2435.9	2375.3	2289.9	2164.5	2049.9	1952.6	1847.7
12.5°	2920.2	2896.4	2885.6	2819.7	2772.1	2671.5	2558.0	2387.2	2234.8	2082.3	1943.9
15°	3212.1	3176.4	3155.9	3084.5	3022.9	2926.7	2791.6	2589.4	2380.7	2180.7	1998.0
17.5°	3402.4	3375.4	3352.7	3285.6	3216.5	3104.0	2951.6	2715.9	2475.9	2230.4	2012.0
20°	3545.1	3514.9	3481.3	3412.1	3334.3	3214.3	3037.0	2782.9	2510.5	2229.4	1983.9
22.5°	3631.6	3588.4	3561.3	3479.2	3401.3	3267.3	3074.8	2785.1	2482.3	2171.0	1913.7
25°	3664.1	3621.9	3586.2	3496.5	3407.8	3256.5	3043.5	2720.2	2379.6	2062.9	1812.0
27.5°	3641.3	3595.9	3554.9	3463.0	3360.2	3181.9	2935.3	2579.6	2230.4	1929.9	1674.7
30°	3560.3	3518.1	3468.4	3374.3	3254.3	3043.5	2758.0	2378.6	2038.0	1758.0	1509.3
32.5°	3421.9	3384.0	3323.5	3219.7	3062.9	2819.7	2511.5	2135.3	1880.1	1581.7	1337.4
35°	3230.5	3184.0	3101.8	2980.8	2784.0	2506.1	2209.9	1899.6	1642.3	1393.6	1154.7
37.5°	2951.6	2889.9	2828.3	2645.6	2430.4	2179.6	1925.5	1674.7	1406.6	1189.3	973.0
40°	2555.9	2502.9	2433.7	2239.1	2070.4	1868.2	1644.4	1409.8	1196.8	977.4	786.0
42.5°	2141.8	2058.5	2004.5	1863.9	1725.5	1525.5	1308.2	1100.6	927.6	757.9	606.5
45°	1618.5	1592.5	1535.2	1431.5	1327.7	1182.8	1042.2	872.5	725.5	592.5	466.0
47.5°	1276.8	1253.1	1209.8	1133.1	1058.5	937.4	815.2	681.1	556.8	431.4	339.5
50°	1014.1	976.3	938.4	873.6	800.1	709.2	607.6	484.4	361.1	278.9	228.1
52.5°	695.2	669.2	641.1	589.2	529.8	459.5	361.1	271.4	205.4	161.1	134.1
55°	388.1	384.9	354.6	318.9	264.9	224.9	171.9	137.3	114.6	100.5	89.7
57.5°	198.9	194.6	173.0	153.5	135.1	115.7	101.6	91.9	85.4	78.9	75.7
60°	114.6	110.3	104.9	100.5	93.0	86.5	80.0	74.6	71.4	66.0	62.7
62.5°	82.2	82.2	78.9	75.7	72.4	68.1	63.8	60.5	58.4	54.1	51.9
65°	62.7	62.7	60.5	58.4	56.2	54.1	50.8	47.6	46.5	43.2	41.1
67.5°	47.6	46.5	45.4	44.3	42.2	41.1	37.8	35.7	34.6	32.4	31.4
70°	32.4	32.4	31.4	31.4	31.4	29.2	27.0	25.9	24.9	23.8	23.8
72.5°	20.5	20.5	20.5	20.5	19.5	18.4	18.4	18.4	18.4	17.3	17.3
75°	14.1	13.0	13.0	13.0	13.0	13.0	13.0	13.0	14.1	14.1	14.1
77.5°	9.7	9.7	9.7	9.7	9.7	10.8	10.8	10.8	11.9	11.9	13.0
80°	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	9.7	9.7	10.8
82.5°	6.5	6.5	6.5	6.5	6.5	6.5	7.6	7.6	7.6	7.6	8.6
85°	4.3	4.3	4.3	4.3	4.3	4.3	5.4	5.4	5.4	5.4	5.4
87.5°	2.2	2.2	2.2	2.2	2.2	2.2	3.2	3.2	3.2	3.2	3.2
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: P130039

CATALOG NUMBER: HL618TAT - HLM6930 - HL6FL - 456W

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1266.0	1266.0	1266.0	1266.0	1266.0	1266.0	1266.0	1266.0	1266.0	1266.0	1266.0
2.5°	1404.4	1394.7	1355.8	1341.7	1337.4	1287.7	1295.2	1265.0	1239.0	1216.3	1196.8
5°	1548.2	1517.9	1445.5	1407.7	1377.4	1301.7	1283.3	1232.5	1185.0	1144.9	1102.8
7.5°	1671.5	1609.8	1509.3	1447.7	1390.4	1288.7	1247.7	1177.4	1109.3	1053.0	996.8
10°	1761.2	1669.3	1543.9	1458.5	1375.2	1247.7	1186.0	1100.6	1010.9	946.0	881.1
12.5°	1821.8	1702.8	1548.2	1432.5	1328.7	1183.9	1108.2	1003.3	910.3	836.8	755.7
15°	1842.3	1696.3	1519.0	1382.8	1258.5	1109.3	1015.2	904.9	802.2	714.6	641.1
17.5°	1827.2	1656.3	1457.4	1307.1	1168.7	1008.7	908.2	791.4	687.6	606.5	523.3
20°	1774.2	1585.0	1374.2	1210.9	1063.9	902.8	794.7	677.9	576.3	493.0	423.8
22.5°	1689.9	1487.7	1267.1	1096.3	951.4	791.4	677.9	566.5	470.3	404.4	352.5
25°	1575.2	1369.8	1143.9	977.4	831.4	667.1	563.3	461.7	388.1	337.3	296.2
27.5°	1435.8	1229.3	1015.2	855.2	710.3	560.0	461.7	384.9	325.4	286.5	250.8
30°	1282.3	1084.4	881.1	722.2	591.4	455.2	382.7	324.3	276.8	243.3	216.2
32.5°	1119.0	939.5	747.1	597.9	475.7	377.3	320.0	273.5	234.6	208.7	187.0
35°	953.6	787.1	614.1	479.0	386.0	313.5	266.0	228.1	201.1	179.5	163.3
37.5°	799.0	639.0	481.1	380.6	311.4	255.2	221.6	193.5	173.0	156.8	143.8
40°	622.7	486.5	368.7	302.7	255.2	211.9	189.2	167.6	150.3	137.3	127.6
42.5°	473.5	374.1	299.5	247.6	209.7	178.4	160.0	141.6	128.7	115.7	108.1
45°	358.9	293.0	240.0	195.7	171.9	144.9	128.7	114.6	104.9	98.4	93.0
47.5°	268.1	218.4	177.3	146.0	129.7	109.2	100.5	93.0	88.7	86.5	82.2
50°	180.6	146.0	120.0	104.9	97.3	87.6	85.4	82.2	77.8	74.6	71.4
52.5°	112.4	98.4	88.7	84.3	82.2	78.9	74.6	71.4	67.0	66.0	63.8
55°	84.3	81.1	75.7	72.4	70.3	64.9	62.7	61.6	59.5	58.4	56.2
57.5°	71.4	68.1	63.8	60.5	59.5	56.2	55.1	51.9	50.8	49.7	48.7
60°	59.5	57.3	54.1	51.9	50.8	47.6	46.5	45.4	44.3	43.2	42.2
62.5°	48.7	47.6	44.3	43.2	42.2	40.0	38.9	38.9	37.8	37.8	36.8
65°	38.9	37.8	35.7	34.6	33.5	32.4	33.5	32.4	32.4	33.5	33.5
67.5°	30.3	30.3	28.1	28.1	28.1	27.0	28.1	28.1	29.2	30.3	31.4
70°	22.7	22.7	22.7	22.7	23.8	23.8	24.9	25.9	27.0	28.1	29.2
72.5°	17.3	18.4	18.4	19.5	20.5	20.5	22.7	22.7	23.8	24.9	25.9
75°	15.1	16.2	16.2	17.3	18.4	18.4	19.5	20.5	21.6	21.6	22.7
77.5°	13.0	14.1	14.1	15.1	16.2	16.2	17.3	17.3	18.4	19.5	19.5
80°	10.8	10.8	11.9	11.9	13.0	13.0	14.1	14.1	14.1	15.1	15.1
82.5°	8.6	8.6	8.6	9.7	9.7	9.7	10.8	10.8	10.8	11.9	11.9
85°	5.4	6.5	6.5	6.5	6.5	6.5	7.6	7.6	7.6	7.6	7.6
87.5°	3.2	3.2	3.2	3.2	4.3	4.3	4.3	4.3	4.3	4.3	4.3
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: P130039

CATALOG NUMBER: HL618TAT - HLM6930 - HL6FL - 456W

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1266.0	1266.0	1266.0	1266.0	1266.0	1266.0	1266.0	1266.0	1266.0	1266.0	1266.0
2.5°	1179.5	1170.9	1146.0	1134.1	1117.9	1098.5	1086.6	1085.5	1090.9	1054.1	1046.6
5°	1071.4	1042.2	1000.1	976.3	940.6	917.9	898.4	889.8	874.7	855.2	832.5
7.5°	951.4	907.1	861.7	820.6	788.2	752.5	727.6	702.8	691.9	666.0	648.7
10°	826.0	775.2	719.0	671.4	633.6	591.4	564.4	540.6	522.2	499.5	481.1
12.5°	694.1	640.0	573.0	528.7	490.8	456.2	428.1	414.1	398.9	386.0	366.5
15°	571.9	511.4	458.4	418.4	389.2	361.1	343.8	329.8	314.6	301.6	293.0
17.5°	459.5	411.9	370.8	339.5	315.7	293.0	277.9	266.0	257.3	242.2	237.9
20°	377.3	338.4	308.1	282.2	259.5	242.2	229.2	222.7	216.2	204.3	198.9
22.5°	314.6	285.4	257.3	235.7	222.7	207.6	196.8	190.3	184.9	176.2	174.1
25°	263.8	242.2	219.5	204.3	190.3	178.4	171.9	166.5	162.2	155.7	153.5
27.5°	227.0	208.7	190.3	177.3	167.6	158.9	150.3	149.2	148.1	141.6	140.6
30°	195.7	181.6	167.6	157.8	150.3	143.8	139.5	135.1	136.2	131.9	130.8
32.5°	171.9	161.1	150.3	141.6	137.3	131.9	128.7	128.7	127.6	123.3	123.3
35°	151.4	143.8	136.2	129.7	126.5	122.2	118.9	117.8	117.8	112.4	112.4
37.5°	136.2	128.7	122.2	117.8	114.6	109.2	107.0	106.0	104.9	101.6	101.6
40°	118.9	113.5	108.1	103.8	100.5	97.3	95.1	95.1	95.1	91.9	91.9
42.5°	101.6	98.4	95.1	91.9	90.8	87.6	85.4	85.4	85.4	81.1	82.2
45°	89.7	88.7	85.4	82.2	80.0	77.8	75.7	76.8	76.8	73.5	74.6
47.5°	80.0	77.8	74.6	72.4	71.4	70.3	69.2	69.2	69.2	67.0	67.0
50°	70.3	68.1	67.0	66.0	64.9	63.8	61.6	61.6	61.6	60.5	60.5
52.5°	62.7	61.6	59.5	58.4	58.4	56.2	56.2	54.1	56.2	54.1	55.1
55°	55.1	54.1	53.0	51.9	51.9	50.8	50.8	50.8	50.8	50.8	51.9
57.5°	47.6	47.6	46.5	46.5	46.5	45.4	46.5	47.6	48.7	47.6	49.7
60°	42.2	42.2	41.1	42.2	43.2	43.2	44.3	45.4	47.6	47.6	48.7
62.5°	36.8	38.9	38.9	40.0	41.1	42.2	43.2	44.3	46.5	45.4	47.6
65°	34.6	35.7	36.8	37.8	40.0	40.0	41.1	42.2	43.2	43.2	45.4
67.5°	32.4	34.6	34.6	35.7	36.8	36.8	38.9	40.0	41.1	41.1	42.2
70°	30.3	31.4	32.4	33.5	34.6	34.6	35.7	36.8	37.8	36.8	37.8
72.5°	27.0	28.1	29.2	29.2	30.3	30.3	31.4	32.4	33.5	33.5	34.6
75°	23.8	24.9	24.9	25.9	27.0	27.0	28.1	28.1	29.2	29.2	30.3
77.5°	20.5	20.5	21.6	21.6	22.7	22.7	23.8	23.8	24.9	24.9	24.9
80°	16.2	17.3	17.3	17.3	18.4	18.4	18.4	19.5	19.5	19.5	20.5
82.5°	11.9	13.0	13.0	13.0	14.1	14.1	14.1	14.1	15.1	15.1	15.1
85°	8.6	8.6	8.6	8.6	8.6	9.7	9.7	9.7	9.7	9.7	9.7
87.5°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
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: P130039

CATALOG NUMBER: HL618TAT - HLM6930 - HL6FL - 456W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1266.0	1266.0	1266.0	1266.0
2.5°	1056.3	1050.9	1035.8	1032.5
5°	836.8	826.0	815.2	812.0
7.5°	649.8	635.7	620.6	628.2
10°	467.1	464.9	457.3	455.2
12.5°	356.8	354.6	348.1	341.6
15°	283.3	283.3	277.9	272.5
17.5°	228.1	230.3	223.8	220.6
20°	193.5	192.4	190.3	188.1
22.5°	168.7	168.7	167.6	163.3
25°	149.2	150.3	149.2	147.0
27.5°	137.3	138.4	137.3	136.2
30°	128.7	128.7	127.6	127.6
32.5°	121.1	121.1	121.1	120.0
35°	110.3	111.4	110.3	110.3
37.5°	99.5	99.5	99.5	99.5
40°	89.7	90.8	90.8	89.7
42.5°	80.0	80.0	80.0	78.9
45°	72.4	73.5	72.4	72.4
47.5°	66.0	66.0	66.0	64.9
50°	59.5	59.5	59.5	59.5
52.5°	54.1	54.1	55.1	54.1
55°	50.8	51.9	51.9	51.9
57.5°	49.7	49.7	50.8	50.8
60°	48.7	48.7	49.7	49.7
62.5°	46.5	48.7	47.6	47.6
65°	44.3	44.3	45.4	45.4
67.5°	41.1	42.2	42.2	42.2
70°	37.8	37.8	38.9	38.9
72.5°	33.5	34.6	34.6	34.6
75°	29.2	30.3	30.3	30.3
77.5°	24.9	24.9	25.9	25.9
80°	20.5	20.5	20.5	20.5
82.5°	15.1	15.1	15.1	15.1
85°	9.7	9.7	9.7	9.7
87.5°	4.3	4.3	4.3	4.3
90°	0.0	0.0	0.0	0.0

(END OF REPORT)