

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: P130025

Luminaire Tested: **HL618TAT - HLM6927 - HL6FL - 455SC**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P130025  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33449)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: HL618TAT - HLM6927 - HL6FL - 455SC  
Description: HALO ALLSLOPE 6" 30W, Specular Clear Reflector, 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: 1926.0 lumens  
Efficiency: N/A  
Efficacy: 69.8 lumens/watt  
Spacing Criteria (0/90/45): 1.45 / 0.65 / 1  
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')  
CIE Type: Direct

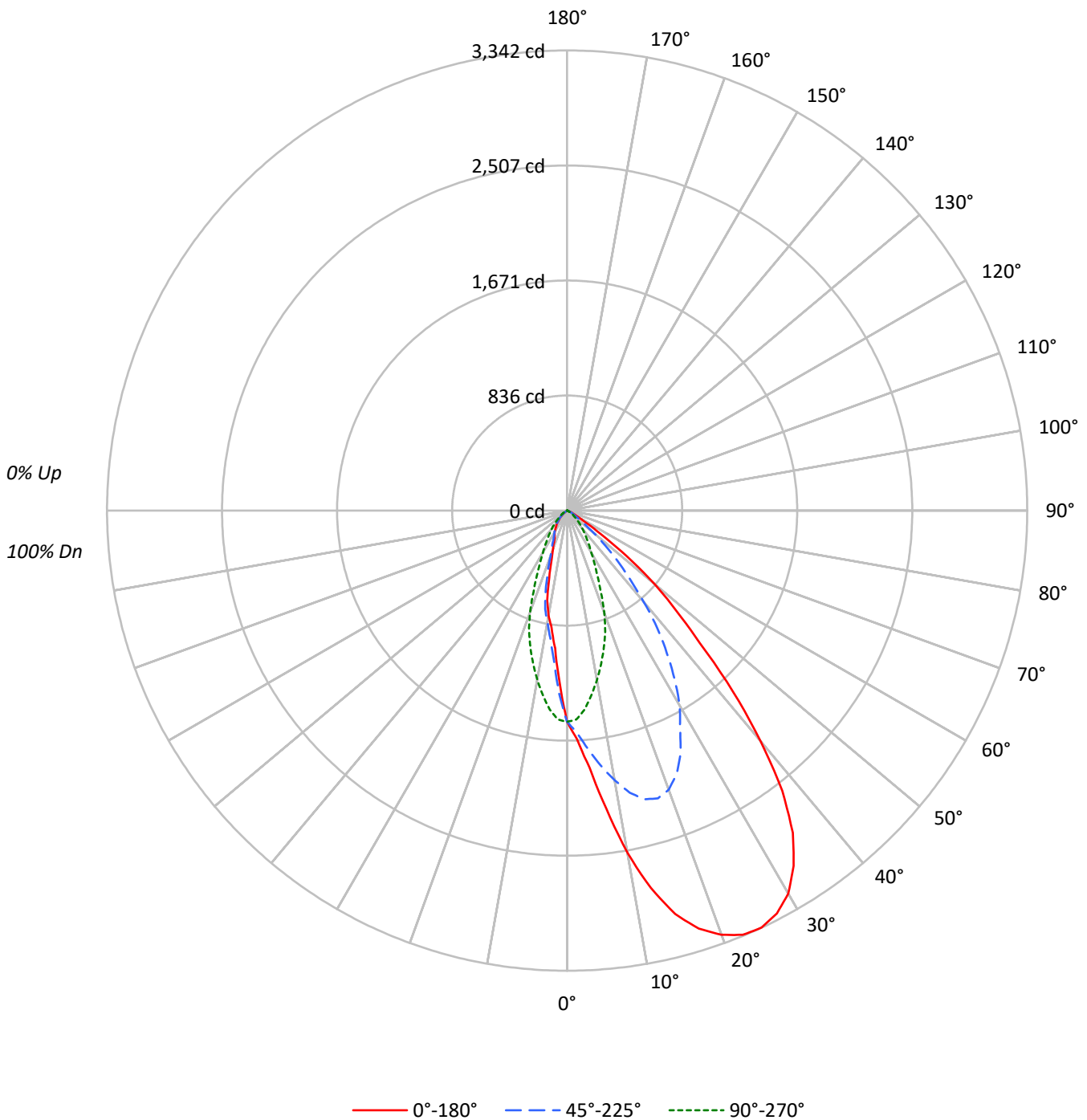
Input Watts (W): 27.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P130025

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 455SC

### 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	113	110	107	104	110	108	105	103	103	101	100	100	98	97	96	95	94	92					92			
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	88	86	84					84			
3	100	93	87	83	98	91	86	82	89	84	81	86	82	79	84	81	78	76					76			
4	94	85	79	74	92	84	78	74	82	77	73	80	76	72	78	74	71	70					70			
5	88	79	72	67	87	78	72	67	76	71	66	74	69	66	73	68	65	64					64			
6	83	73	66	61	81	72	66	61	71	65	61	69	64	60	68	63	60	58					58			
7	78	68	61	56	77	67	61	56	66	60	56	64	59	55	63	59	55	53					53			
8	74	63	56	52	72	62	56	52	61	55	51	60	55	51	59	54	51	49					49			
9	70	59	52	48	68	58	52	48	57	51	47	56	51	47	55	51	47	46					46			
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42					42			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	91554	91554	91554
5°	109842	84955	58786
10°	146235	72194	44808
15°	175011	59414	29012
20°	189902	45693	17550
25°	195819	30291	12423
30°	191923	20855	10816
35°	175509	15114	8540
40°	139267	11150	6308
45°	90897	7803	4402
50°	58320	4937	2327
55°	22405	3319	302
60°	6867	2044	0
65°	3869	900	0
70°	1816	202	0
75°	232	232	0
80°	0	274	0
85°	0	339	0



TEST NUMBER: P130025

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 455SC

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	137.2	7.1
10°-20°	391.2	20.3
20°-30°	525.1	27.3
30°-40°	491.3	25.5
40°-50°	283.3	14.7
50°-60°	79.9	4.1
60°-70°	15.3	0.8
70°-80°	1.9	0.1
80°-90°	0.9	0.0
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°	1053.6	54.7
0°-40°	1544.9	80.2
0°-60°	1908.0	99.1
0°-90°	1926.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1926.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1534	1534	1534	1534	1534	
5°	1876	1738	1451	1092	1004	200
15°	3034	2171	1030	601	503	856
25°	3342	1950	517	238	212	1529
35°	2857	1262	246	151	139	1744
45°	1363	516	117	74	66	1093
55°	297	83	44	22	4	316
65°	43	27	10	1	0	45
75°	2	1	2	1	0	5
85°	0	1	2	1	0	0
90°	0	0	0	0	0	



TEST NUMBER: P130025

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 455SC

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8
2.5°	1661.8	1664.8	1672.8	1655.8	1639.8	1634.8	1639.8	1612.8	1620.8	1612.8	1593.8
5°	1875.8	1888.8	1889.8	1865.8	1841.8	1830.8	1821.8	1767.8	1766.8	1737.8	1694.8
7.5°	2183.8	2188.8	2168.8	2134.8	2088.8	2051.8	2018.8	1942.8	1920.8	1867.8	1804.8
10°	2525.7	2538.7	2513.7	2464.7	2388.7	2333.8	2249.8	2137.8	2074.8	1988.8	1898.8
12.5°	2806.7	2816.7	2802.7	2735.7	2660.7	2598.7	2482.7	2336.8	2229.8	2097.8	1962.8
15°	3033.7	3038.7	3025.7	2952.7	2868.7	2784.7	2663.7	2492.7	2356.8	2170.8	1993.8
17.5°	3182.7	3187.7	3183.7	3098.7	3010.7	2922.7	2780.7	2590.7	2411.7	2190.8	1981.8
20°	3278.7	3294.7	3275.7	3197.7	3093.7	2999.7	2836.7	2620.7	2413.7	2156.8	1922.8
22.5°	3334.6	3348.6	3325.7	3242.7	3129.7	3025.7	2839.7	2595.7	2355.8	2073.8	1831.8
25°	3341.6	3356.6	3329.6	3236.7	3117.7	2992.7	2778.7	2507.7	2232.8	1949.8	1717.8
27.5°	3297.7	3312.7	3279.7	3184.7	3056.7	2907.7	2654.7	2357.8	2071.8	1773.8	1569.8
30°	3211.7	3212.7	3179.7	3081.7	2931.7	2757.7	2466.7	2146.8	1895.8	1634.8	1406.9
32.5°	3060.7	3073.7	3025.7	2912.7	2677.7	2528.7	2222.8	1927.8	1698.8	1452.8	1259.9
35°	2856.7	2861.7	2800.7	2671.7	2447.7	2232.8	1947.8	1701.8	1494.8	1261.9	1062.9
37.5°	2565.7	2569.7	2490.7	2351.8	2114.8	1928.8	1683.8	1470.8	1277.9	1075.9	890.9
40°	2185.8	2185.8	2096.8	1968.8	1776.8	1629.8	1425.8	1229.9	1053.9	864.9	710.9
42.5°	1783.8	1766.8	1709.8	1593.8	1442.8	1292.9	1113.9	955.9	818.9	671.9	545.9
45°	1362.9	1355.9	1319.9	1232.9	1123.9	1020.9	876.9	758.9	641.9	515.9	407.0
47.5°	1068.9	1068.9	1041.9	971.9	887.9	802.9	692.9	583.9	484.9	373.0	295.0
50°	826.9	831.9	790.9	732.9	658.9	595.9	490.9	398.0	315.0	245.0	196.0
52.5°	543.9	550.9	515.9	473.0	412.0	362.0	274.0	215.0	171.0	141.0	117.0
55°	297.0	293.0	272.0	241.0	195.0	164.0	130.0	109.0	95.0	83.0	75.0
57.5°	142.0	140.0	126.0	111.0	99.0	89.0	79.0	72.0	67.0	63.0	59.0
60°	84.0	82.0	80.0	74.0	70.0	65.0	60.0	56.0	53.0	49.0	46.0
62.5°	59.0	59.0	58.0	56.0	52.0	49.0	45.0	42.0	40.0	37.0	35.0
65°	43.0	42.0	42.0	40.0	38.0	36.0	33.0	31.0	30.0	27.0	25.0
67.5°	29.0	29.0	29.0	28.0	26.0	24.0	22.0	21.0	19.0	17.0	16.0
70°	18.0	18.0	17.0	16.0	15.0	14.0	12.0	12.0	11.0	9.0	8.0
72.5°	8.0	8.0	8.0	7.0	7.0	6.0	5.0	5.0	4.0	3.0	3.0
75°	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
77.5°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
80°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
85°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
87.5°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
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: P130025

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 455SC

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8
2.5°	1621.8	1590.8	1582.8	1593.8	1577.8	1545.8	1538.8	1518.8	1493.8	1481.8	1467.8
5°	1703.8	1660.8	1635.8	1629.8	1592.8	1536.8	1501.8	1450.8	1401.9	1363.9	1319.9
7.5°	1792.8	1722.8	1672.8	1635.8	1566.8	1480.8	1417.9	1350.9	1280.9	1228.9	1176.9
10°	1859.8	1755.8	1670.8	1601.8	1508.8	1397.9	1325.9	1246.9	1166.9	1103.9	1049.9
12.5°	1889.8	1751.8	1640.8	1549.8	1436.8	1319.9	1226.9	1138.9	1053.9	994.9	937.9
15°	1887.8	1721.8	1587.8	1480.8	1352.9	1222.9	1119.9	1029.9	947.9	892.9	839.9
17.5°	1845.8	1658.8	1504.8	1384.9	1246.9	1110.9	1013.9	919.9	838.9	771.9	703.9
20°	1773.8	1572.8	1402.9	1264.9	1125.9	989.9	885.9	788.9	691.9	623.9	553.9
22.5°	1671.8	1460.8	1279.9	1133.9	990.9	855.9	740.9	637.9	548.9	488.9	442.0
25°	1541.8	1326.9	1142.9	992.9	849.9	716.9	601.9	516.9	440.0	394.0	358.0
27.5°	1388.9	1173.9	1002.9	857.9	713.9	588.9	489.9	421.0	364.0	328.0	300.0
30°	1227.9	1025.9	857.9	726.9	588.9	474.0	399.0	349.0	308.0	276.0	256.0
32.5°	1056.9	874.9	730.9	597.9	476.9	389.0	335.0	297.0	258.0	238.0	221.0
35°	896.9	728.9	591.9	475.9	388.0	326.0	281.0	246.0	223.0	204.0	191.0
37.5°	745.9	587.9	459.0	375.0	313.0	264.0	232.0	208.0	189.0	175.0	166.0
40°	578.9	449.0	359.0	303.0	256.0	216.0	193.0	175.0	161.0	151.0	143.0
42.5°	438.0	343.0	286.0	243.0	208.0	179.0	164.0	146.0	135.0	127.0	119.0
45°	330.0	267.0	225.0	195.0	167.0	144.0	131.0	117.0	107.0	102.0	96.0
47.5°	246.0	201.0	168.0	147.0	124.0	108.0	99.0	90.0	84.0	80.0	77.0
50°	166.0	135.0	115.0	100.0	89.0	81.0	76.0	70.0	67.0	65.0	61.0
52.5°	102.0	87.0	78.0	73.0	68.0	64.0	61.0	57.0	52.0	50.0	47.0
55°	70.0	65.0	62.0	58.0	54.0	50.0	47.0	44.0	42.0	40.0	37.0
57.5°	57.0	52.0	48.0	45.0	42.0	39.0	37.0	35.0	32.0	30.0	28.0
60°	43.0	40.0	37.0	35.0	32.0	30.0	28.0	25.0	23.0	21.0	19.0
62.5°	33.0	30.0	28.0	26.0	24.0	21.0	19.0	17.0	15.0	13.0	11.0
65°	23.0	21.0	19.0	17.0	15.0	13.0	12.0	10.0	8.0	6.0	4.0
67.5°	15.0	13.0	11.0	9.0	8.0	6.0	5.0	4.0	2.0	2.0	1.0
70°	7.0	6.0	4.0	4.0	3.0	2.0	2.0	2.0	1.0	1.0	1.0
72.5°	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
75°	1.0	1.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0
77.5°	1.0	1.0	1.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	2.0
80°	1.0	1.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0
82.5°	1.0	1.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
85°	1.0	1.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
87.5°	1.0	1.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0
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: P130025

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 455SC

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8
2.5°	1428.8	1425.8	1397.9	1373.9	1356.9	1328.9	1315.9	1301.9	1268.9	1269.9	1283.9
5°	1264.9	1238.9	1199.9	1159.9	1131.9	1091.9	1072.9	1052.9	1037.9	1021.9	1020.9
7.5°	1111.9	1076.9	1035.9	996.9	972.9	933.9	916.9	896.9	882.9	872.9	873.9
10°	981.9	948.9	909.9	890.9	856.9	824.9	812.9	798.9	789.9	782.9	788.9
12.5°	882.9	849.9	816.9	783.9	762.9	734.9	719.9	706.9	694.9	688.9	686.9
15°	777.9	740.9	701.9	661.9	641.9	600.9	584.9	564.9	548.9	534.9	519.9
17.5°	639.9	600.9	561.9	518.9	488.9	463.0	444.0	423.0	406.0	394.0	388.0
20°	502.9	465.0	435.0	397.0	376.0	354.0	342.0	326.0	317.0	312.0	310.0
22.5°	397.0	365.0	342.0	317.0	302.0	287.0	279.0	268.0	260.0	254.0	254.0
25°	323.0	301.0	282.0	265.0	255.0	238.0	232.0	225.0	220.0	216.0	218.0
27.5°	270.0	262.0	242.0	225.0	217.0	206.0	203.0	198.0	196.0	194.0	195.0
30°	233.0	219.0	210.0	198.0	192.0	184.0	184.0	181.0	180.0	180.0	182.0
32.5°	203.0	192.0	184.0	176.0	174.0	168.0	169.0	166.0	164.0	163.0	163.0
35°	177.0	169.0	164.0	159.0	157.0	151.0	150.0	147.0	144.0	141.0	142.0
37.5°	155.0	150.0	145.0	140.0	137.0	131.0	130.0	128.0	126.0	125.0	125.0
40°	134.0	129.0	125.0	119.0	117.0	111.0	112.0	110.0	106.0	104.0	103.0
42.5°	111.0	107.0	103.0	100.0	98.0	92.0	90.0	85.0	84.0	83.0	84.0
45°	91.0	87.0	84.0	79.0	77.0	74.0	73.0	71.0	69.0	67.0	68.0
47.5°	73.0	70.0	66.0	64.0	62.0	59.0	58.0	56.0	55.0	53.0	53.0
50°	57.0	55.0	53.0	50.0	49.0	46.0	45.0	43.0	41.0	39.0	38.0
52.5°	45.0	44.0	42.0	39.0	37.0	35.0	33.0	29.0	26.0	23.0	23.0
55°	35.0	33.0	31.0	28.0	26.0	22.0	19.0	16.0	13.0	9.0	8.0
57.5°	26.0	23.0	21.0	17.0	14.0	10.0	8.0	4.0	3.0	1.0	0.0
60°	16.0	14.0	10.0	7.0	5.0	2.0	1.0	1.0	0.0	0.0	0.0
62.5°	8.0	6.0	3.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
65°	3.0	2.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
67.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0
70°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0
72.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0
75°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0
77.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0
82.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0
85°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0
87.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0
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: P130025

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 455SC

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1533.8	1533.8	1533.8	1533.8
2.5°	1229.9	1244.9	1218.9	1247.9
5°	986.9	988.9	981.9	1003.9
7.5°	845.9	853.9	843.9	859.9
10°	764.9	767.9	762.9	773.9
12.5°	670.9	661.9	657.9	668.9
15°	512.9	509.9	496.9	502.9
17.5°	379.0	375.0	374.0	373.0
20°	301.0	297.0	296.0	303.0
22.5°	246.0	244.0	241.0	248.0
25°	212.0	212.0	210.0	212.0
27.5°	191.0	192.0	191.0	194.0
30°	178.0	179.0	178.0	181.0
32.5°	158.0	159.0	157.0	158.0
35°	138.0	138.0	137.0	139.0
37.5°	122.0	123.0	122.0	124.0
40°	100.0	99.0	98.0	99.0
42.5°	82.0	81.0	81.0	83.0
45°	65.0	65.0	65.0	66.0
47.5°	51.0	50.0	50.0	50.0
50°	36.0	34.0	34.0	33.0
52.5°	19.0	18.0	18.0	17.0
55°	6.0	5.0	5.0	4.0
57.5°	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)