

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: P130042

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P130042
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33453)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HL618TAT - HLM6927 - HL6FL - 456P
Description: HALO ALLSLOPE 6" 30W, Black 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: 1770.0 lumens
Efficiency: N/A
Efficacy: 64.1 lumens/watt
Spacing Criteria (0/90/45): 1.62 / 0.66 / 1.08
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')
CIE Type: Direct

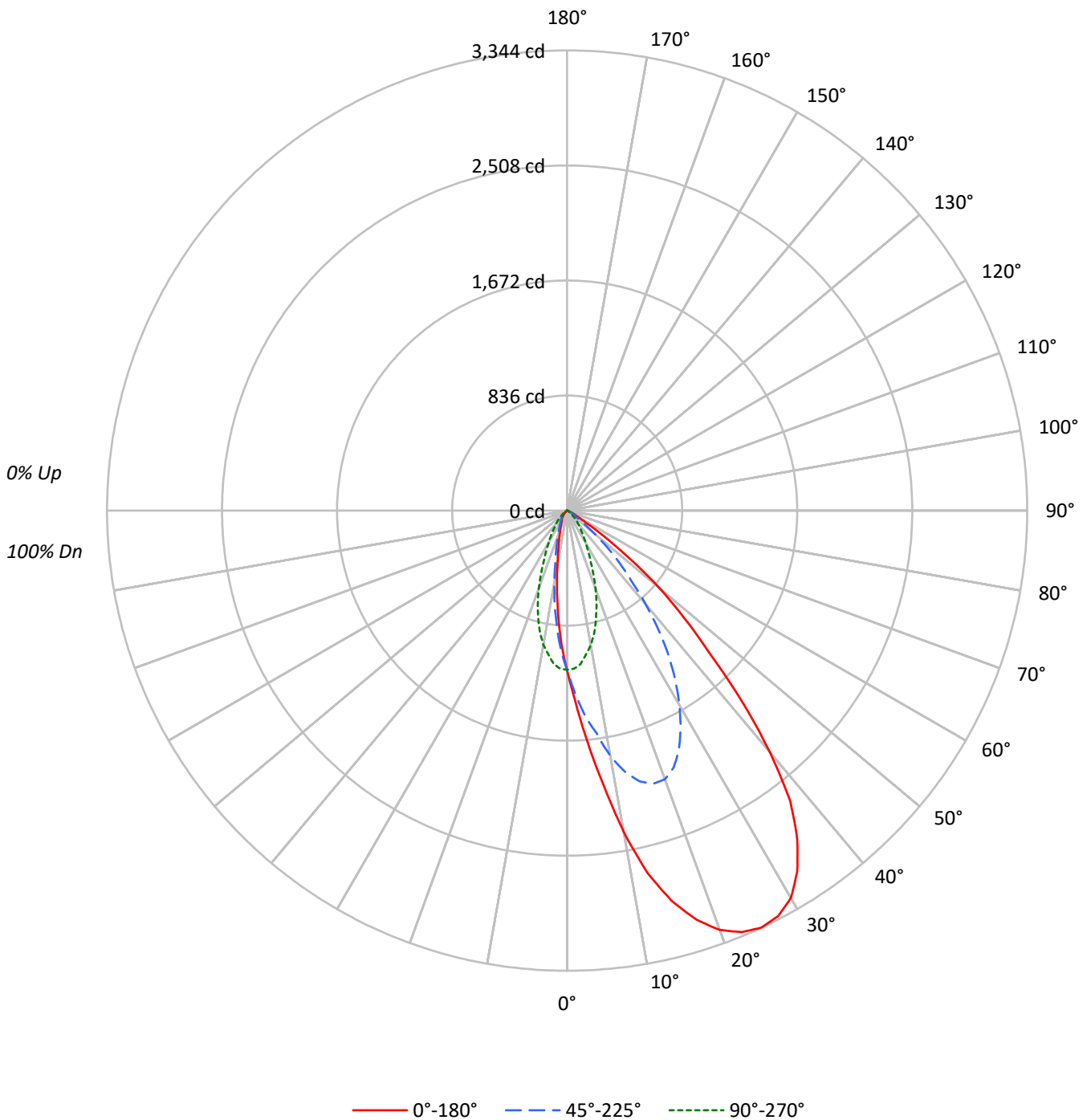
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P130042

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 456P

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	113	110	107	104	110	107	105	103	103	101	99	100	98	96	96	95	94	92
2	106	101	96	92	104	99	95	91	95	92	89	92	90	87	90	87	85	83
3	100	92	87	82	98	91	86	81	88	84	80	86	82	79	83	80	77	76
4	93	85	78	74	92	84	78	73	81	76	72	79	75	71	77	74	70	69
5	88	78	71	66	86	77	71	66	75	70	66	73	69	65	72	68	64	63
6	82	72	65	60	81	71	65	60	70	64	60	68	63	59	67	62	59	57
7	77	67	60	55	76	66	60	55	65	59	55	63	58	54	62	58	54	52
8	73	62	55	51	72	61	55	50	60	54	50	59	54	50	58	53	50	48
9	69	58	51	47	68	57	51	46	56	50	46	55	50	46	54	49	46	44
10	65	54	47	43	64	54	47	43	53	47	43	52	46	43	51	46	43	41

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	69116	69116	69116
5°	98599	65520	43912
10°	137376	57372	23275
15°	169357	46722	13153
20°	187869	34862	8225
25°	195936	23382	5801
30°	194307	15955	4601
35°	179196	10997	3748
40°	145887	7964	2676
45°	97093	5135	1667
50°	61634	3315	776
55°	23914	2188	151
60°	6949	1308	82
65°	3779	450	180
70°	1715	202	202
75°	232	232	116
80°	0	274	137
85°	0	339	0



TEST NUMBER: P130042

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 456P

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.6	6.3
10°-20°	334.4	18.9
20°-30°	486.8	27.5
30°-40°	470.9	26.6
40°-50°	273.9	15.5
50°-60°	75.0	4.2
60°-70°	14.0	0.8
70°-80°	2.3	0.1
80°-90°	1.0	0.1
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°	932.8	52.7
0°-40°	1403.7	79.3
0°-60°	1752.7	99.0
0°-90°	1770.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1770.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1158	1158	1158	1158	1158	
5°	1684	1497	1119	849	750	181
15°	2936	2038	810	311	228	831
25°	3344	1920	399	132	99	1531
35°	2917	1284	179	75	61	1788
45°	1456	534	77	35	25	1160
55°	317	75	29	9	2	335
65°	42	24	5	2	2	45
75°	2	1	2	1	1	5
85°	0	1	2	1	0	0
90°	0	0	0	0	0	



TEST NUMBER: P130042

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 456P

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1157.9	1157.9	1157.9	1157.9	1157.9	1157.9	1157.9	1157.9	1157.9	1157.9	1157.9
2.5°	1391.8	1383.8	1373.8	1386.8	1364.9	1367.8	1350.9	1358.9	1320.9	1327.9	1314.9
5°	1683.8	1673.8	1661.8	1647.8	1625.8	1620.8	1581.8	1578.8	1520.8	1496.8	1473.8
7.5°	2002.8	1997.8	1974.8	1949.8	1911.8	1876.8	1815.8	1798.8	1710.8	1631.8	1606.8
10°	2372.7	2366.7	2314.7	2302.7	2240.8	2175.8	2066.8	2009.8	1886.8	1812.8	1725.8
12.5°	2695.7	2678.7	2639.7	2617.7	2529.7	2453.7	2322.7	2225.8	2057.8	1944.8	1808.8
15°	2935.7	2926.7	2895.7	2865.7	2779.7	2691.7	2529.7	2413.7	2193.8	2037.8	1864.8
17.5°	3115.7	3100.7	3075.7	3041.7	2954.7	2843.7	2663.7	2534.7	2283.7	2080.8	1876.8
20°	3243.6	3228.6	3266.6	3162.7	3062.7	2952.7	2747.7	2594.7	2311.7	2077.8	1848.8
22.5°	3315.6	3242.6	3272.6	3233.6	3122.7	3000.7	2780.7	2595.7	2279.7	2021.8	1781.8
25°	3343.6	3272.6	3296.6	3249.6	3130.7	2991.7	2749.7	2532.7	2189.8	1919.8	1681.8
27.5°	3320.6	3307.6	3267.6	3213.6	3085.7	2923.7	2711.7	2402.7	2048.8	1785.8	1554.8
30°	3251.6	3229.6	3186.7	3128.7	2989.7	2793.7	2486.7	2214.8	1877.8	1633.8	1408.8
32.5°	3110.7	3099.7	3057.7	2977.7	2814.7	2584.7	2266.8	1996.8	1690.8	1461.8	1246.9
35°	2916.7	2911.7	2857.7	2753.7	2549.7	2302.7	1990.8	1771.8	1492.8	1283.9	1071.9
37.5°	2662.7	2639.7	2570.7	2446.7	2224.8	1994.8	1731.8	1540.8	1294.9	1086.9	899.9
40°	2289.7	2292.7	2210.8	2067.8	1878.8	1699.8	1473.8	1300.9	1069.9	885.9	713.9
42.5°	1880.8	1863.8	1801.8	1684.8	1549.8	1374.8	1167.9	1022.9	826.9	684.9	547.9
45°	1455.8	1424.8	1386.8	1301.9	1197.9	1080.9	918.9	804.9	650.9	533.9	411.0
47.5°	1148.9	1125.9	1101.9	1028.9	949.9	839.9	716.9	622.9	494.9	391.0	296.0
50°	873.9	865.9	844.9	788.9	706.9	624.9	526.9	433.0	326.0	247.0	193.0
52.5°	571.9	606.9	548.9	521.9	450.0	381.0	308.0	235.0	172.0	134.0	108.0
55°	317.0	313.0	304.0	264.0	221.0	181.0	137.0	110.0	87.0	75.0	66.0
57.5°	155.0	156.0	145.0	124.0	101.0	88.0	75.0	68.0	60.0	55.0	51.0
60°	85.0	85.0	82.0	75.0	67.0	63.0	56.0	52.0	47.0	44.0	40.0
62.5°	59.0	58.0	57.0	54.0	51.0	47.0	43.0	40.0	36.0	34.0	30.0
65°	42.0	42.0	41.0	39.0	37.0	34.0	31.0	29.0	26.0	24.0	22.0
67.5°	29.0	28.0	28.0	28.0	25.0	24.0	21.0	20.0	17.0	15.0	14.0
70°	17.0	17.0	16.0	16.0	15.0	13.0	12.0	11.0	9.0	8.0	7.0
72.5°	7.0	7.0	7.0	7.0	6.0	6.0	5.0	4.0	4.0	3.0	3.0
75°	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
77.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
80°	0.0	0.0	0.0	0.0	1.0	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: P130042

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 456P

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1157.9	1157.9	1157.9	1157.9	1157.9	1157.9	1157.9	1157.9	1157.9	1157.9	1157.9
2.5°	1302.9	1268.9	1257.9	1215.9	1214.9	1191.9	1164.9	1149.9	1124.9	1103.9	1092.9
5°	1444.8	1378.8	1344.9	1275.9	1252.9	1205.9	1155.9	1118.9	1073.9	1032.9	1001.9
7.5°	1554.8	1471.8	1405.8	1310.9	1234.9	1193.9	1121.9	1052.9	1003.9	946.9	905.9
10°	1638.8	1529.8	1436.8	1316.9	1246.9	1156.9	1064.9	990.9	918.9	846.9	794.9
12.5°	1695.8	1557.8	1439.8	1296.9	1205.9	1097.9	991.9	908.9	819.9	742.9	682.9
15°	1714.8	1553.8	1412.8	1249.9	1140.9	1021.9	906.9	809.9	716.9	636.9	567.9
17.5°	1699.8	1516.8	1353.9	1184.9	1056.9	927.9	808.9	708.9	612.9	525.9	455.9
20°	1654.8	1451.8	1273.9	1093.9	963.9	826.9	705.9	601.9	505.9	422.0	364.0
22.5°	1575.8	1361.9	1176.9	989.9	854.9	719.9	597.9	494.9	410.0	346.0	298.0
25°	1466.8	1244.9	1056.9	870.9	741.9	606.9	492.9	399.0	331.0	283.0	247.0
27.5°	1339.9	1121.9	934.9	756.9	631.9	510.9	390.0	329.0	274.0	231.0	201.0
30°	1190.9	976.9	805.9	641.9	521.9	404.0	322.0	267.0	227.0	191.0	169.0
32.5°	1036.9	842.9	683.9	531.9	417.0	326.0	265.0	221.0	186.0	160.0	141.0
35°	879.9	706.9	554.9	422.0	331.0	267.0	215.0	179.0	155.0	133.0	118.0
37.5°	725.9	568.9	437.0	325.0	262.0	213.0	175.0	149.0	129.0	113.0	101.0
40°	559.9	428.0	330.0	253.0	207.0	171.0	145.0	125.0	108.0	95.0	85.0
42.5°	422.0	324.0	257.0	204.0	167.0	141.0	119.0	103.0	88.0	77.0	70.0
45°	315.0	249.0	199.0	159.0	131.0	110.0	91.0	77.0	67.0	60.0	54.0
47.5°	230.0	183.0	147.0	113.0	93.0	78.0	66.0	58.0	53.0	48.0	44.0
50°	147.0	114.0	94.0	74.0	63.0	57.0	51.0	47.0	43.0	39.0	35.0
52.5°	84.0	70.0	61.0	54.0	49.0	46.0	41.0	37.0	33.0	30.0	27.0
55°	58.0	53.0	49.0	43.0	40.0	35.0	32.0	29.0	26.0	23.0	21.0
57.5°	47.0	43.0	38.0	34.0	30.0	28.0	26.0	22.0	20.0	17.0	15.0
60°	36.0	33.0	30.0	26.0	24.0	21.0	19.0	16.0	14.0	11.0	10.0
62.5°	27.0	25.0	22.0	19.0	17.0	14.0	12.0	10.0	9.0	7.0	5.0
65°	20.0	17.0	15.0	12.0	11.0	9.0	7.0	5.0	5.0	4.0	3.0
67.5°	12.0	10.0	9.0	7.0	6.0	5.0	4.0	3.0	2.0	2.0	2.0
70°	6.0	5.0	4.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
72.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
75°	1.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
77.5°	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
80°	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
82.5°	1.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
85°	1.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
87.5°	1.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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: P130042

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 456P

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1157.9	1157.9	1157.9	1157.9	1157.9	1157.9	1157.9	1157.9	1157.9	1157.9	1157.9
2.5°	1081.9	1057.9	1052.9	1027.9	1014.9	1015.9	987.9	988.9	974.9	968.9	957.9
5°	977.9	942.9	896.9	886.9	855.9	848.9	811.9	798.9	776.9	761.9	754.9
7.5°	862.9	817.9	784.9	738.9	704.9	687.9	656.9	640.9	606.9	606.9	575.9
10°	738.9	687.9	649.9	599.9	559.9	534.9	503.9	474.9	454.0	431.0	421.0
12.5°	619.9	556.9	517.9	466.9	430.0	401.0	377.0	354.0	333.0	321.0	308.0
15°	503.9	442.0	406.0	364.0	333.0	311.0	286.0	271.0	256.0	246.0	241.0
17.5°	407.0	352.0	319.0	287.0	260.0	247.0	226.0	213.0	200.0	192.0	182.0
20°	323.0	283.0	257.0	230.0	209.0	195.0	181.0	169.0	162.0	154.0	150.0
22.5°	262.0	232.0	209.0	184.0	170.0	161.0	147.0	139.0	132.0	126.0	123.0
25°	214.0	188.0	171.0	154.0	140.0	132.0	125.0	116.0	111.0	106.0	103.0
27.5°	177.0	158.0	143.0	128.0	118.0	112.0	104.0	99.0	95.0	92.0	89.0
30°	149.0	132.0	121.0	110.0	101.0	97.0	91.0	87.0	83.0	81.0	79.0
32.5°	125.0	113.0	104.0	95.0	88.0	85.0	81.0	78.0	75.0	73.0	71.0
35°	106.0	95.0	90.0	84.0	78.0	75.0	71.0	69.0	67.0	64.0	63.0
37.5°	91.0	84.0	77.0	73.0	68.0	65.0	61.0	58.0	56.0	55.0	53.0
40°	77.0	71.0	66.0	61.0	56.0	54.0	50.0	48.0	47.0	45.0	43.0
42.5°	62.0	56.0	54.0	50.0	46.0	44.0	41.0	39.0	38.0	36.0	35.0
45°	50.0	46.0	44.0	40.0	37.0	35.0	32.0	30.0	29.0	27.0	26.0
47.5°	41.0	37.0	35.0	31.0	29.0	28.0	25.0	24.0	22.0	21.0	19.0
50°	31.0	29.0	27.0	24.0	23.0	21.0	19.0	17.0	15.0	14.0	13.0
52.5°	25.0	23.0	21.0	18.0	16.0	14.0	12.0	11.0	10.0	8.0	7.0
55°	19.0	17.0	14.0	12.0	11.0	9.0	7.0	6.0	5.0	4.0	3.0
57.5°	13.0	11.0	9.0	7.0	6.0	5.0	3.0	3.0	2.0	2.0	2.0
60°	8.0	6.0	5.0	4.0	3.0	2.0	2.0	2.0	2.0	1.0	1.0
62.5°	4.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
65°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
67.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
70°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0
72.5°	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
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°	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
80°	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
85°	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0
87.5°	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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: P130042

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 456P

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1157.9	1157.9	1157.9	1157.9
2.5°	958.9	950.9	936.9	967.9
5°	751.9	733.9	731.9	749.9
7.5°	568.9	550.9	547.9	560.9
10°	415.0	402.0	400.0	402.0
12.5°	301.0	298.0	293.0	296.0
15°	233.0	225.0	225.0	228.0
17.5°	179.0	176.0	173.0	175.0
20°	145.0	142.0	139.0	142.0
22.5°	119.0	117.0	115.0	117.0
25°	101.0	99.0	97.0	99.0
27.5°	88.0	86.0	85.0	86.0
30°	78.0	76.0	76.0	77.0
32.5°	70.0	69.0	68.0	69.0
35°	62.0	61.0	60.0	61.0
37.5°	52.0	51.0	50.0	51.0
40°	43.0	42.0	41.0	42.0
42.5°	34.0	32.0	32.0	33.0
45°	25.0	24.0	24.0	25.0
47.5°	18.0	18.0	18.0	18.0
50°	12.0	11.0	11.0	11.0
52.5°	7.0	6.0	6.0	6.0
55°	3.0	2.0	2.0	2.0
57.5°	1.0	1.0	1.0	1.0
60°	1.0	1.0	1.0	1.0
62.5°	2.0	2.0	1.0	2.0
65°	2.0	2.0	2.0	2.0
67.5°	2.0	2.0	2.0	2.0
70°	2.0	2.0	1.0	2.0
72.5°	1.0	1.0	1.0	1.0
75°	1.0	1.0	1.0	1.0
77.5°	1.0	1.0	1.0	1.0
80°	1.0	1.0	0.0	1.0
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)