

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: P130112

Luminaire Tested: **HL618TAT - HLM6930 - HL6WFL - 455TBZ**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P130112  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33488)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: HL618TAT - HLM6930 - HL6WFL - 455TBZ  
Description: HALO ALLSLOPE 6" 30W, Tuscan Bronze Reflector, Tuscan Bronze Metal Trim Ring using 55 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: 2093.2 lumens  
Efficiency: N/A  
Efficacy: 75.8 lumens/watt  
Spacing Criteria (0/90/45): 1.38 / 0.75 / 1.12  
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')  
CIE Type: Direct

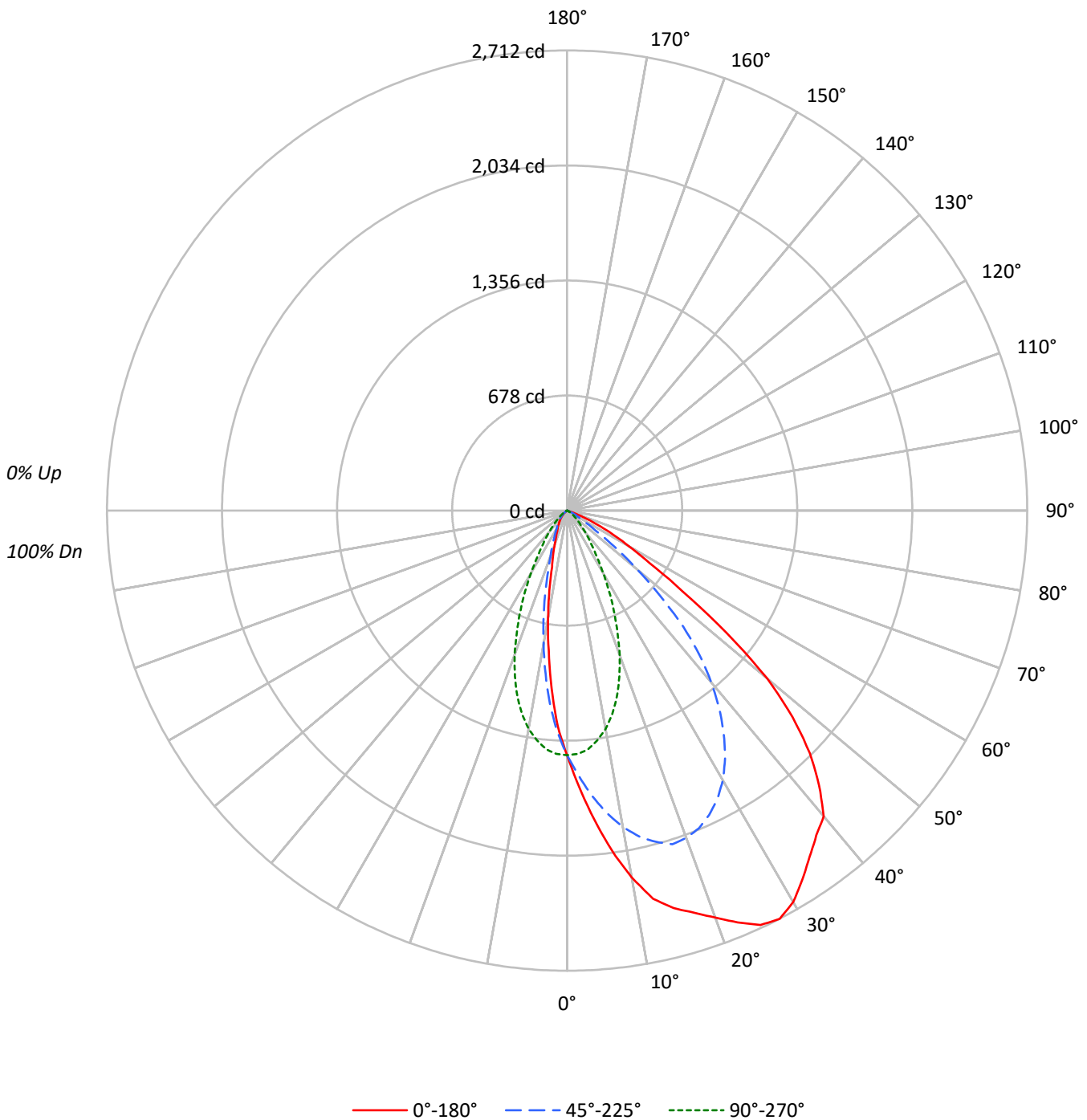
Input Watts (W): 27.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### 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	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	101	99	99	97	96	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	90	84	80	96	89	83	79	86	81	78	84	80	76	81	78	75	73				73
4	92	83	76	71	90	81	75	70	79	74	69	77	72	68	75	71	68	66				66
5	86	76	68	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59				59
6	80	69	62	57	79	69	62	57	67	61	56	65	60	56	64	59	56	54				54
7	75	64	57	52	74	63	56	52	62	56	51	61	55	51	59	54	51	49				49
8	71	59	52	47	69	59	52	47	57	51	47	56	51	47	55	50	46	45				45
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41				41
10	63	51	44	40	62	51	44	40	50	44	40	49	43	39	48	43	39	38				38

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

	0°	90°	180°
0°	86056	86056	86056
5°	106984	82730	61591
10°	127088	75633	37449
15°	139907	65350	19828
20°	147840	52406	12401
25°	157916	38172	8204
30°	159241	25373	6292
35°	153054	15925	4835
40°	149876	10392	3613
45°	134894	6636	2468
50°	108536	4161	1389
55°	62501	2708	438
60°	34337	1512	98
65°	17904	729	0
70°	4550	232	0
75°	405	266	0
80°	0	315	0
85°	0	390	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	133.5	6.4
10°-20°	353.5	16.9
20°-30°	483.1	23.1
30°-40°	510.8	24.4
40°-50°	402.9	19.2
50°-60°	167.9	8.0
60°-70°	37.5	1.8
70°-80°	3.1	0.1
80°-90°	1.0	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°	970.1	46.3
0°-40°	1480.9	70.7
0°-60°	2051.6	98.0
0°-90°	2093.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2093.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1442	1442	1442	1442	1442	
5°	1827	1688	1413	1148	1052	186
15°	2425	2021	1133	493	344	687
25°	2695	1980	651	185	140	1233
35°	2491	1610	259	96	79	1565
45°	2023	966	100	50	37	1534
55°	828	202	36	14	6	790
65°	199	32	8	1	0	207
75°	4	2	2	1	0	10
85°	0	1	2	1	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1441.7	1441.7	1441.7	1441.7	1441.7	1441.7	1441.7	1441.7	1441.7
2.5°	1629.2	1595.6	1564.4	1499.6	1435.9	1386.2	1306.3	1260.1	1271.6
5°	1827.0	1772.6	1688.2	1551.6	1412.8	1284.4	1147.8	1068.0	1051.8
7.5°	2021.4	1945.1	1799.3	1614.1	1365.4	1164.0	973.1	859.7	833.1
10°	2195.0	2098.9	1893.0	1596.8	1306.3	1031.0	800.7	673.4	646.8
12.5°	2343.1	2228.5	1968.2	1594.5	1228.8	909.5	638.7	509.1	482.5
15°	2425.2	2331.5	2021.4	1570.2	1132.8	752.1	492.9	374.9	343.7
17.5°	2484.3	2396.3	2061.9	1526.2	1022.9	620.2	371.4	284.6	271.9
20°	2552.5	2419.5	2052.7	1463.7	904.8	491.8	284.6	229.1	214.1
22.5°	2626.6	2435.7	2027.2	1390.8	772.9	380.7	231.4	182.8	172.4
25°	2694.8	2439.1	1979.8	1295.9	651.4	296.2	185.1	146.9	140.0
27.5°	2712.2	2427.6	1916.1	1177.9	534.6	237.2	151.6	123.8	120.3
30°	2664.8	2399.8	1835.1	1055.3	424.6	193.2	123.8	107.6	105.3
32.5°	2579.1	2367.4	1732.2	923.4	329.8	158.5	108.8	94.9	91.4
35°	2491.2	2307.2	1609.5	790.3	259.2	131.9	96.0	82.2	78.7
37.5°	2412.5	2201.9	1473.0	658.4	209.4	109.9	83.3	70.6	67.1
40°	2352.3	2071.2	1320.2	529.9	163.1	96.0	71.7	60.2	56.7
42.5°	2198.5	1895.3	1155.9	395.7	127.3	82.2	60.2	50.9	47.4
45°	2022.6	1705.5	966.2	269.6	99.5	67.1	49.8	40.5	37.0
47.5°	1802.7	1479.9	740.5	182.8	77.5	53.2	38.2	30.1	28.9
50°	1538.9	1213.8	536.9	119.2	59.0	41.7	27.8	22.0	19.7
52.5°	1183.7	922.2	349.4	78.7	46.3	31.2	20.8	13.9	11.6
55°	828.5	616.7	202.5	57.9	35.9	23.1	13.9	8.1	5.8
57.5°	575.1	406.1	122.7	44.0	26.6	16.2	8.1	3.5	2.3
60°	420.0	290.4	76.4	32.4	18.5	10.4	3.5	1.2	1.2
62.5°	302.0	195.5	49.8	24.3	12.7	5.8	2.3	1.2	1.2
65°	199.0	113.4	32.4	16.2	8.1	3.5	1.2	1.2	0.0
67.5°	109.9	56.7	19.7	9.3	4.6	2.3	1.2	1.2	0.0
70°	45.1	25.5	10.4	4.6	2.3	2.3	1.2	0.0	0.0
72.5°	12.7	9.3	4.6	2.3	2.3	2.3	1.2	0.0	0.0
75°	3.5	3.5	2.3	2.3	2.3	2.3	1.2	0.0	0.0
77.5°	1.2	1.2	1.2	2.3	2.3	2.3	1.2	0.0	0.0
80°	0.0	1.2	1.2	1.2	2.3	1.2	1.2	0.0	0.0
82.5°	0.0	1.2	1.2	2.3	2.3	2.3	1.2	0.0	0.0
85°	0.0	0.0	1.2	1.2	2.3	1.2	1.2	0.0	0.0
87.5°	0.0	0.0	1.2	1.2	2.3	1.2	1.2	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)