

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: P130113

Luminaire Tested: **HL618TAT - HLM6935 - HL6WFL - 455TBZ**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P130113  
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 - HLM6935 - 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 / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2184.6 lumens  
Efficiency: N/A  
Efficacy: 79.2 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

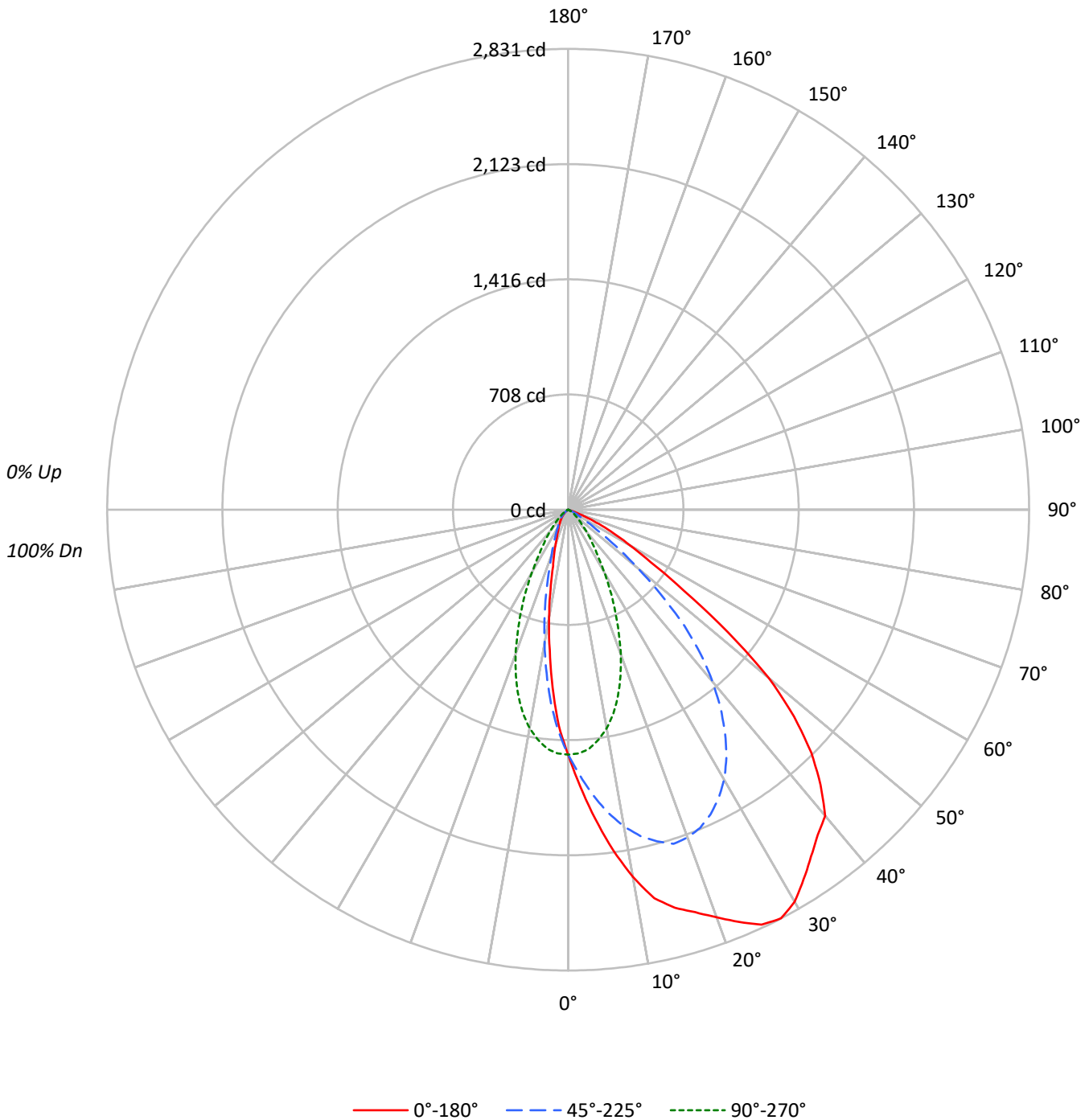
Input Watts (W): 27.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	89817	89817	89817
5°	111657	86343	64278
10°	132640	78939	39087
15°	146022	68206	20693
20°	154298	54700	12939
25°	164819	39842	8562
30°	166197	26484	6567
35°	159738	16619	5044
40°	156426	10851	3772
45°	140784	6929	2574
50°	113275	4345	1446
55°	65232	2821	453
60°	35841	1578	98
65°	18687	765	0
70°	4751	242	0
75°	417	278	0
80°	0	329	0
85°	0	407	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	139.3	6.4
10°-20°	369.0	16.9
20°-30°	504.2	23.1
30°-40°	533.2	24.4
40°-50°	420.5	19.2
50°-60°	175.2	8.0
60°-70°	39.2	1.8
70°-80°	3.2	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°	1012.4	46.3
0°-40°	1545.6	70.7
0°-60°	2141.3	98.0
0°-90°	2184.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2184.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1505	1505	1505	1505	1505	
5°	1907	1762	1474	1198	1098	194
15°	2531	2110	1182	514	359	717
25°	2813	2066	680	193	146	1287
35°	2600	1680	270	100	82	1634
45°	2111	1008	104	52	39	1602
55°	865	211	37	14	6	825
65°	208	34	8	1	0	216
75°	4	2	2	1	0	11
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°	1504.7	1504.7	1504.7	1504.7	1504.7	1504.7	1504.7	1504.7	1504.7
2.5°	1700.3	1665.3	1632.7	1565.1	1498.7	1446.7	1363.4	1315.1	1327.2
5°	1906.8	1850.1	1761.9	1619.4	1474.5	1340.5	1198.0	1114.6	1097.7
7.5°	2109.7	2030.0	1877.9	1684.6	1425.0	1214.9	1015.6	897.3	869.5
10°	2290.9	2190.6	1975.7	1666.5	1363.4	1076.0	835.7	702.8	675.1
12.5°	2445.4	2325.9	2054.2	1664.1	1282.5	949.2	666.6	531.4	503.6
15°	2531.2	2433.4	2109.7	1638.8	1182.3	785.0	514.4	391.3	358.7
17.5°	2592.8	2501.0	2152.0	1592.9	1067.5	647.3	387.6	297.1	283.8
20°	2664.0	2525.2	2142.3	1527.6	944.4	513.2	297.1	239.1	223.4
22.5°	2741.3	2542.1	2115.8	1451.6	806.7	397.3	241.5	190.8	179.9
25°	2812.6	2545.7	2066.3	1352.5	679.9	309.2	193.2	153.4	146.1
27.5°	2830.7	2533.6	1999.8	1229.4	557.9	247.6	158.2	129.2	125.6
30°	2781.2	2504.6	1915.3	1101.4	443.2	201.7	129.2	112.3	109.9
32.5°	2691.8	2470.8	1807.8	963.7	344.2	165.4	113.5	99.0	95.4
35°	2600.0	2408.0	1679.8	824.8	270.5	137.7	100.2	85.7	82.1
37.5°	2517.9	2298.1	1537.3	687.1	218.6	114.7	86.9	73.7	70.0
40°	2455.1	2161.7	1377.9	553.1	170.3	100.2	74.9	62.8	59.2
42.5°	2294.5	1978.1	1206.4	413.0	132.8	85.7	62.8	53.1	49.5
45°	2110.9	1780.0	1008.4	281.4	103.9	70.0	51.9	42.3	38.6
47.5°	1881.5	1544.6	772.9	190.8	80.9	55.6	39.9	31.4	30.2
50°	1606.1	1266.8	560.3	124.4	61.6	43.5	29.0	22.9	20.5
52.5°	1235.4	962.5	364.7	82.1	48.3	32.6	21.7	14.5	12.1
55°	864.7	643.7	211.3	60.4	37.4	24.2	14.5	8.5	6.0
57.5°	600.2	423.9	128.0	45.9	27.8	16.9	8.5	3.6	2.4
60°	438.4	303.1	79.7	33.8	19.3	10.9	3.6	1.2	1.2
62.5°	315.2	204.1	51.9	25.4	13.3	6.0	2.4	1.2	1.2
65°	207.7	118.3	33.8	16.9	8.5	3.6	1.2	1.2	0.0
67.5°	114.7	59.2	20.5	9.7	4.8	2.4	1.2	1.2	0.0
70°	47.1	26.6	10.9	4.8	2.4	2.4	1.2	0.0	0.0
72.5°	13.3	9.7	4.8	2.4	2.4	2.4	1.2	0.0	0.0
75°	3.6	3.6	2.4	2.4	2.4	2.4	1.2	0.0	0.0
77.5°	1.2	1.2	1.2	2.4	2.4	2.4	1.2	0.0	0.0
80°	0.0	1.2	1.2	1.2	2.4	1.2	1.2	0.0	0.0
82.5°	0.0	1.2	1.2	2.4	2.4	2.4	1.2	0.0	0.0
85°	0.0	0.0	1.2	1.2	2.4	1.2	1.2	0.0	0.0
87.5°	0.0	0.0	1.2	1.2	2.4	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)