

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: P130246

Luminaire Tested: **HL612ICAT - HLM6927 - HL6WFL - 455TBZ**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P130246  
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: HL612ICAT - HLM6927 - HL6WFL - 455TBZ  
Description: HALO ALLSLOPE 6" 21W, Tuscan Bronze Reflector, Tuscan Bronze Metal Trim Ring using 55 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: 1409.6 lumens  
Efficiency: N/A  
Efficacy: 73.8 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

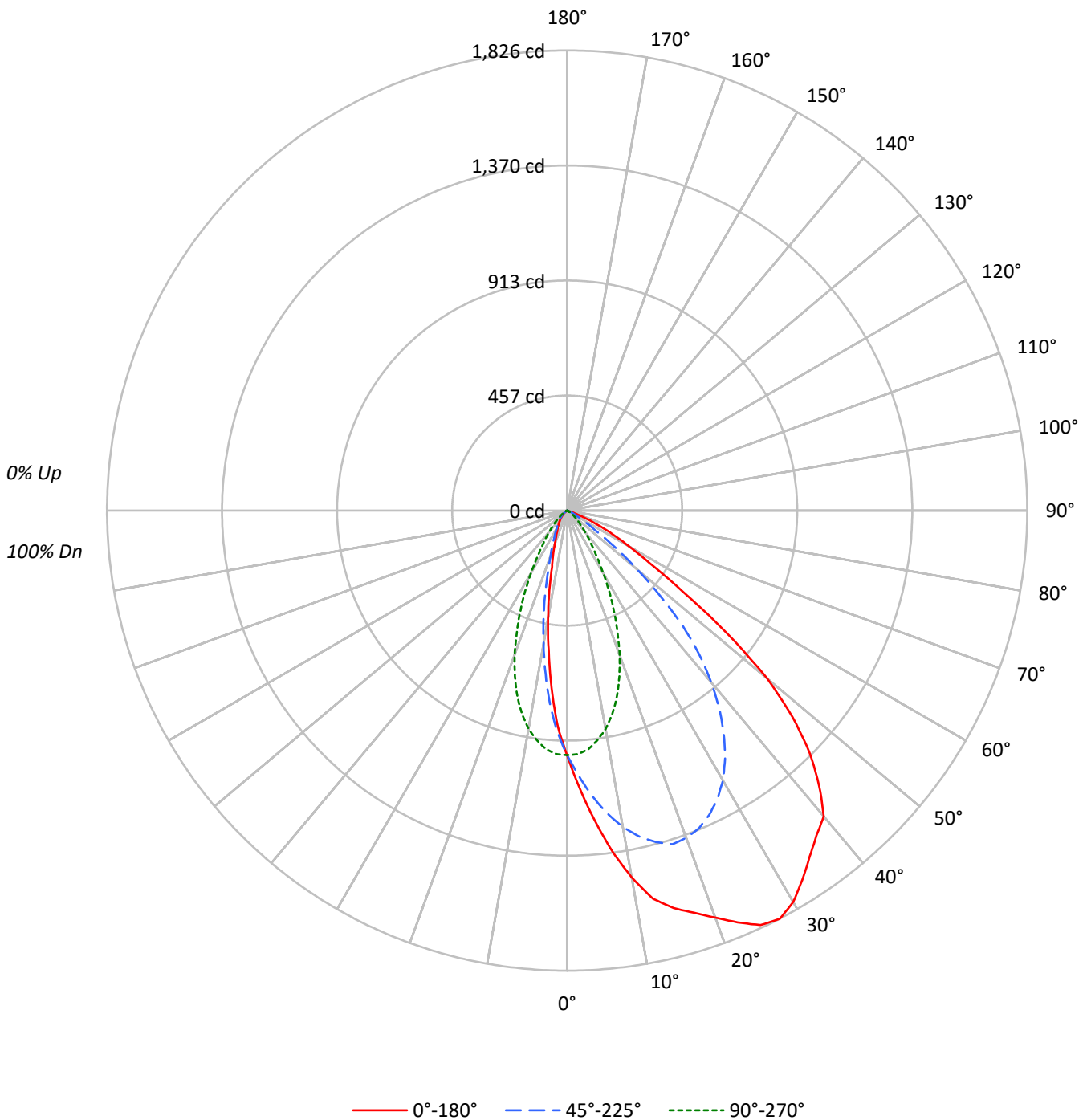
Input Watts (W): 19.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	57948	57948	57948
5°	72043	55711	41476
10°	85580	50934	25221
15°	94212	44005	13349
20°	99558	35291	8346
25°	106342	25708	5526
30°	107229	17091	4237
35°	103068	10721	3256
40°	100930	7002	2434
45°	90837	4468	1661
50°	73088	2800	931
55°	42088	1826	294
60°	23120	1022	65
65°	12056	495	0
70°	3067	161	0
75°	266	185	0
80°	0	219	0
85°	0	271	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.9	6.4
10°-20°	238.1	16.9
20°-30°	325.3	23.1
30°-40°	344.0	24.4
40°-50°	271.3	19.2
50°-60°	113.1	8.0
60°-70°	25.3	1.8
70°-80°	2.1	0.1
80°-90°	0.7	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°	653.2	46.3
0°-40°	997.2	70.7
0°-60°	1381.6	98.0
0°-90°	1409.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1409.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	971	971	971	971	971	
5°	1230	1137	951	773	708	125
15°	1633	1361	763	332	231	463
25°	1815	1333	439	125	94	831
35°	1678	1084	174	65	53	1054
45°	1362	651	67	34	25	1033
55°	558	136	24	9	4	532
65°	134	22	6	1	0	139
75°	2	2	2	1	0	7
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°	970.8	970.8	970.8	970.8	970.8	970.8	970.8	970.8	970.8
2.5°	1097.1	1074.5	1053.4	1009.8	967.0	933.4	879.7	848.5	856.3
5°	1230.3	1193.7	1136.8	1044.9	951.4	864.9	772.9	719.2	708.3
7.5°	1361.2	1309.8	1211.6	1086.9	919.4	783.8	655.3	578.9	561.0
10°	1478.1	1413.4	1274.7	1075.3	879.7	694.2	539.2	453.5	435.6
12.5°	1577.8	1500.7	1325.4	1073.7	827.5	612.4	430.1	342.8	324.9
15°	1633.1	1570.0	1361.2	1057.3	762.8	506.5	331.9	252.5	231.4
17.5°	1672.9	1613.7	1388.5	1027.7	688.8	417.6	250.1	191.7	183.1
20°	1718.9	1629.2	1382.2	985.7	609.3	331.1	191.7	154.3	144.1
22.5°	1768.7	1640.2	1365.1	936.6	520.5	256.3	155.8	123.1	116.1
25°	1814.7	1642.5	1333.2	872.7	438.7	199.5	124.7	99.0	94.3
27.5°	1826.4	1634.7	1290.3	793.2	360.0	159.7	102.1	83.4	81.0
30°	1794.4	1616.0	1235.8	710.6	286.0	130.1	83.4	72.5	70.9
32.5°	1736.8	1594.2	1166.4	621.8	222.1	106.7	73.2	63.9	61.6
35°	1677.6	1553.7	1083.8	532.2	174.5	88.8	64.7	55.3	53.0
37.5°	1624.6	1482.8	991.9	443.3	141.0	74.0	56.1	47.5	45.2
40°	1584.1	1394.7	889.0	356.9	109.9	64.7	48.3	40.5	38.2
42.5°	1480.4	1276.3	778.4	266.5	85.7	55.3	40.5	34.3	31.9
45°	1362.0	1148.5	650.6	181.5	67.0	45.2	33.5	27.3	24.9
47.5°	1213.9	996.6	498.7	123.1	52.2	35.8	25.7	20.3	19.5
50°	1036.3	817.3	361.5	80.3	39.7	28.1	18.7	14.8	13.2
52.5°	797.1	621.0	235.3	53.0	31.2	21.0	14.0	9.4	7.8
55°	557.9	415.3	136.4	39.0	24.2	15.6	9.4	5.5	3.9
57.5°	387.2	273.5	82.6	29.6	17.9	10.9	5.5	2.3	1.6
60°	282.8	195.6	51.4	21.8	12.5	7.0	2.3	0.8	0.8
62.5°	203.4	131.7	33.5	16.4	8.6	3.9	1.6	0.8	0.8
65°	134.0	76.4	21.8	10.9	5.5	2.3	0.8	0.8	0.0
67.5°	74.0	38.2	13.2	6.2	3.1	1.6	0.8	0.8	0.0
70°	30.4	17.1	7.0	3.1	1.6	1.6	0.8	0.0	0.0
72.5°	8.6	6.2	3.1	1.6	1.6	1.6	0.8	0.0	0.0
75°	2.3	2.3	1.6	1.6	1.6	1.6	0.8	0.0	0.0
77.5°	0.8	0.8	0.8	1.6	1.6	1.6	0.8	0.0	0.0
80°	0.0	0.8	0.8	0.8	1.6	0.8	0.8	0.0	0.0
82.5°	0.0	0.8	0.8	1.6	1.6	1.6	0.8	0.0	0.0
85°	0.0	0.0	0.8	0.8	1.6	0.8	0.8	0.0	0.0
87.5°	0.0	0.0	0.8	0.8	1.6	0.8	0.8	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)