

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: P130138

Luminaire Tested: **HL618TAT - HLM6940 - HL6WFL - ERT702**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P130138
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33494)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HL618TAT - HLM6940 - HL6WFL - ERT702
Description: HALO ALLSLOPE 6" 30W, Drop Opal Plastic Lens, White Polymer Trim
Ring "Dead Front", Wet Location - Showerlight using 55 Degree Optic at a
6-12 Pitch
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1808.7 lumens
Efficiency: N/A
Efficacy: 65.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.89 / 1.13
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')
CIE Type: Direct

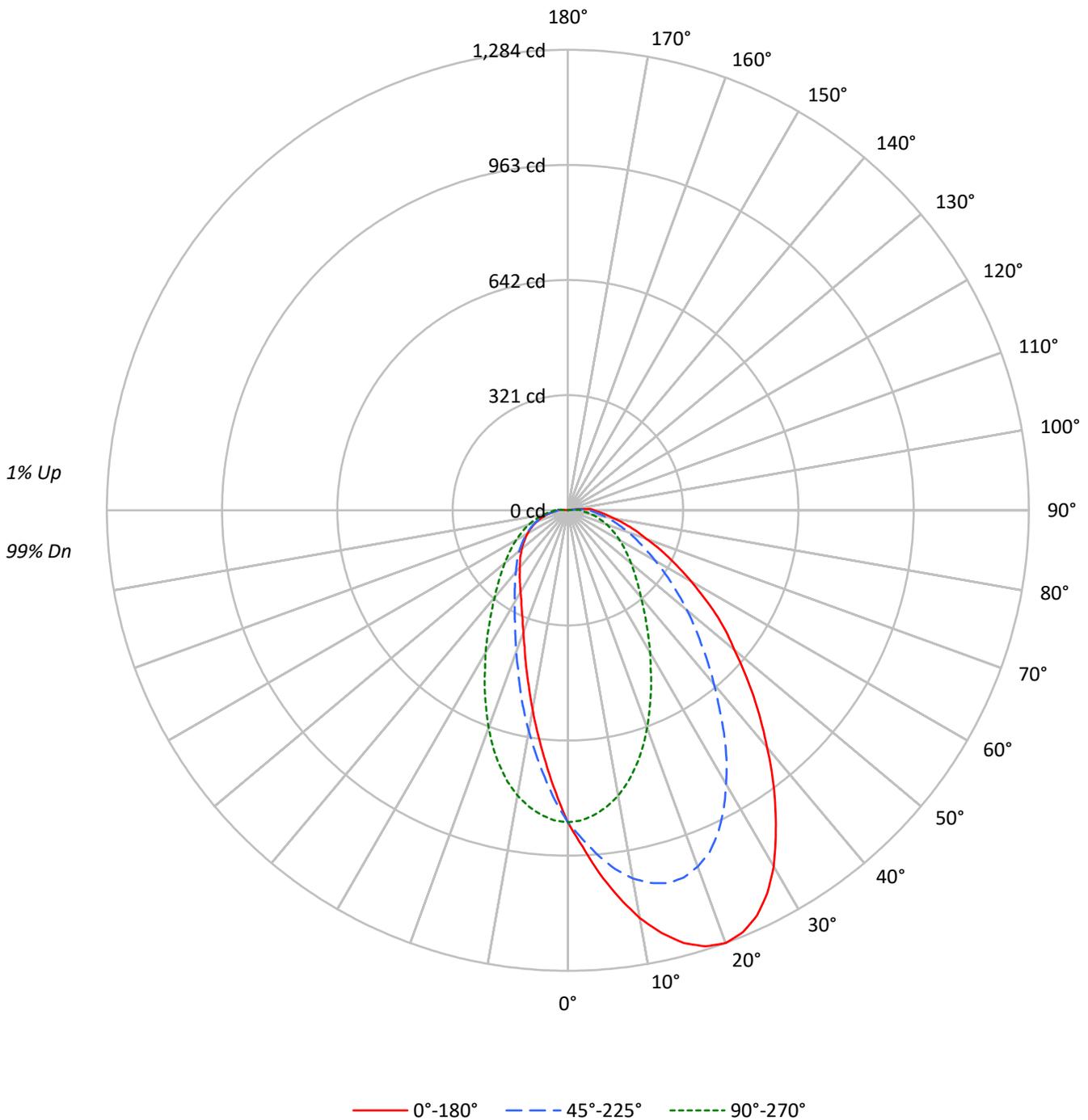
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105	101	101	101	99
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	99	91	85	79	96	89	83	78	85	80	76	82	78	74	79	75	72	70
3	91	81	73	67	89	79	72	66	76	70	65	73	68	64	71	66	62	60
4	84	72	64	58	82	71	63	57	68	62	56	66	60	55	64	59	54	52
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	51	45	70	58	50	44	57	49	44	55	48	44	53	47	43	41
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	37
8	63	50	42	36	61	49	41	36	48	41	36	46	40	35	45	39	35	33
9	59	46	38	33	58	45	38	33	44	37	33	43	37	32	42	36	32	30
10	56	43	35	30	54	42	35	30	41	34	30	40	34	30	39	34	30	28

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	51907	51907	51907
5°	59541	49897	41353
10°	66844	46753	32678
15°	72059	42453	25943
20°	74381	37387	20961
25°	73040	32125	17803
30°	68506	27357	15734
35°	61892	23310	14352
40°	54979	20217	13253
45°	48720	17921	12518
50°	42669	16193	11806
55°	37893	14771	11105
60°	32457	13579	10595
65°	27702	12515	9960
70°	23434	11581	9261
75°	20635	10479	8291
80°	17770	9255	7226
85°	16489	8024	6192



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.1	4.5
10°-20°	222.6	12.3
20°-30°	305.3	16.9
30°-40°	315.4	17.4
40°-50°	281.4	15.6
50°-60°	230.2	12.7
60°-70°	171.1	9.5
70°-80°	114.2	6.3
80°-90°	64.8	3.6
90°-100°	22.6	1.2
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°	609.0	33.7
0°-40°	924.4	51.1
0°-60°	1435.9	79.4
0°-90°	1786.1	98.8
90°-120°	22.6	1.2
90°-150°	22.6	1.2
90°-180°	23.0	1.3
0°-180°	1808.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	870	870	870	870	870	
5°	1017	966	852	745	706	101
15°	1249	1076	736	514	450	353
25°	1246	991	548	348	304	570
35°	1007	758	379	257	234	629
45°	730	524	269	200	188	564
55°	502	351	196	154	147	448
65°	308	224	139	113	111	308
75°	178	140	90	73	72	190
85°	97	78	47	36	36	86
90°	73	59	36	28	28	41
95°	43	34	19	14	15	21
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	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°	869.6	869.6	869.6	869.6	869.6	869.6	869.6	869.6	869.6
2.5°	938.5	923.6	916.9	893.9	865.6	844.0	810.2	799.4	785.9
5°	1016.8	993.9	965.5	914.2	852.1	802.1	745.4	723.8	706.2
7.5°	1088.4	1060.0	1008.7	925.0	833.2	756.2	684.6	650.9	632.0
10°	1154.5	1116.7	1042.5	927.7	807.5	707.6	625.2	586.0	564.4
12.5°	1207.2	1162.6	1064.1	920.9	775.1	654.9	568.5	521.2	502.3
15°	1249.1	1196.4	1076.2	904.7	735.9	606.3	514.5	467.2	449.7
17.5°	1274.7	1215.3	1073.5	876.4	692.7	553.6	461.8	418.6	399.7
20°	1284.2	1218.0	1057.3	841.3	645.5	507.7	420.0	380.8	361.9
22.5°	1273.4	1203.2	1031.7	800.8	595.5	461.8	380.8	345.7	329.5
25°	1246.4	1174.8	991.1	752.1	548.2	421.3	348.4	317.3	303.8
27.5°	1203.2	1130.2	939.8	700.8	499.6	384.8	320.0	293.0	280.9
30°	1146.4	1073.5	881.8	645.5	457.8	352.4	294.4	272.8	263.3
32.5°	1077.6	1007.4	822.4	591.4	417.3	325.4	275.5	255.2	247.1
35°	1007.4	938.5	757.5	537.4	379.4	299.8	256.6	240.4	233.6
37.5°	935.8	872.3	691.4	488.8	347.0	276.8	240.4	226.9	220.1
40°	862.9	803.5	633.3	442.9	317.3	256.6	225.5	214.7	208.0
42.5°	795.4	735.9	577.9	402.4	291.7	239.0	212.0	202.6	197.1
45°	730.5	675.2	523.9	365.9	268.7	222.8	199.9	191.7	187.7
47.5°	665.7	615.8	478.0	333.5	248.5	208.0	187.7	180.9	176.9
50°	605.0	560.4	432.1	302.5	229.6	194.4	176.9	170.1	167.4
52.5°	555.0	509.1	390.2	275.5	212.0	180.9	164.7	160.7	158.0
55°	502.3	456.4	351.1	251.2	195.8	168.8	153.9	149.9	147.2
57.5°	445.6	409.2	314.6	228.2	180.9	156.6	143.1	140.4	139.1
60°	397.0	364.6	280.9	209.3	166.1	144.5	133.7	131.0	129.6
62.5°	349.7	322.7	251.2	189.0	152.6	133.7	122.9	120.2	120.2
65°	307.9	283.6	224.2	171.5	139.1	122.9	113.4	112.1	110.7
67.5°	271.4	248.5	201.2	155.3	126.9	109.4	102.6	102.6	101.3
70°	232.3	218.8	178.2	140.4	114.8	99.9	93.2	91.8	91.8
72.5°	205.3	191.7	158.0	125.6	102.6	89.1	83.7	83.7	82.4
75°	178.2	167.4	140.4	112.1	90.5	79.7	72.9	72.9	71.6
77.5°	153.9	145.8	122.9	98.6	79.7	68.9	63.5	63.5	62.1
80°	129.6	126.9	106.7	85.1	67.5	58.1	55.4	54.0	52.7
82.5°	113.4	109.4	93.2	72.9	56.7	48.6	44.6	44.6	44.6
85°	97.2	93.2	78.3	62.1	47.3	40.5	36.5	36.5	36.5
87.5°	83.7	81.0	67.5	52.7	40.5	33.8	31.1	31.1	31.1
90°	72.9	70.2	59.4	45.9	36.5	29.7	28.4	28.4	28.4
92.5°	66.2	62.1	52.7	37.8	31.1	27.0	24.3	23.0	25.7
95°	43.2	37.8	33.8	21.6	18.9	14.9	13.5	12.2	14.9
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)