

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: P130130

Luminaire Tested: **HL618TAT - HLM6940 - HL6WFL - 71PS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P130130  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33492)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: HL618TAT - HLM6940 - HL6WFL - 71PS  
Description: HALO ALLSLOPE 6" 30W, Drop Opal Glass 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**

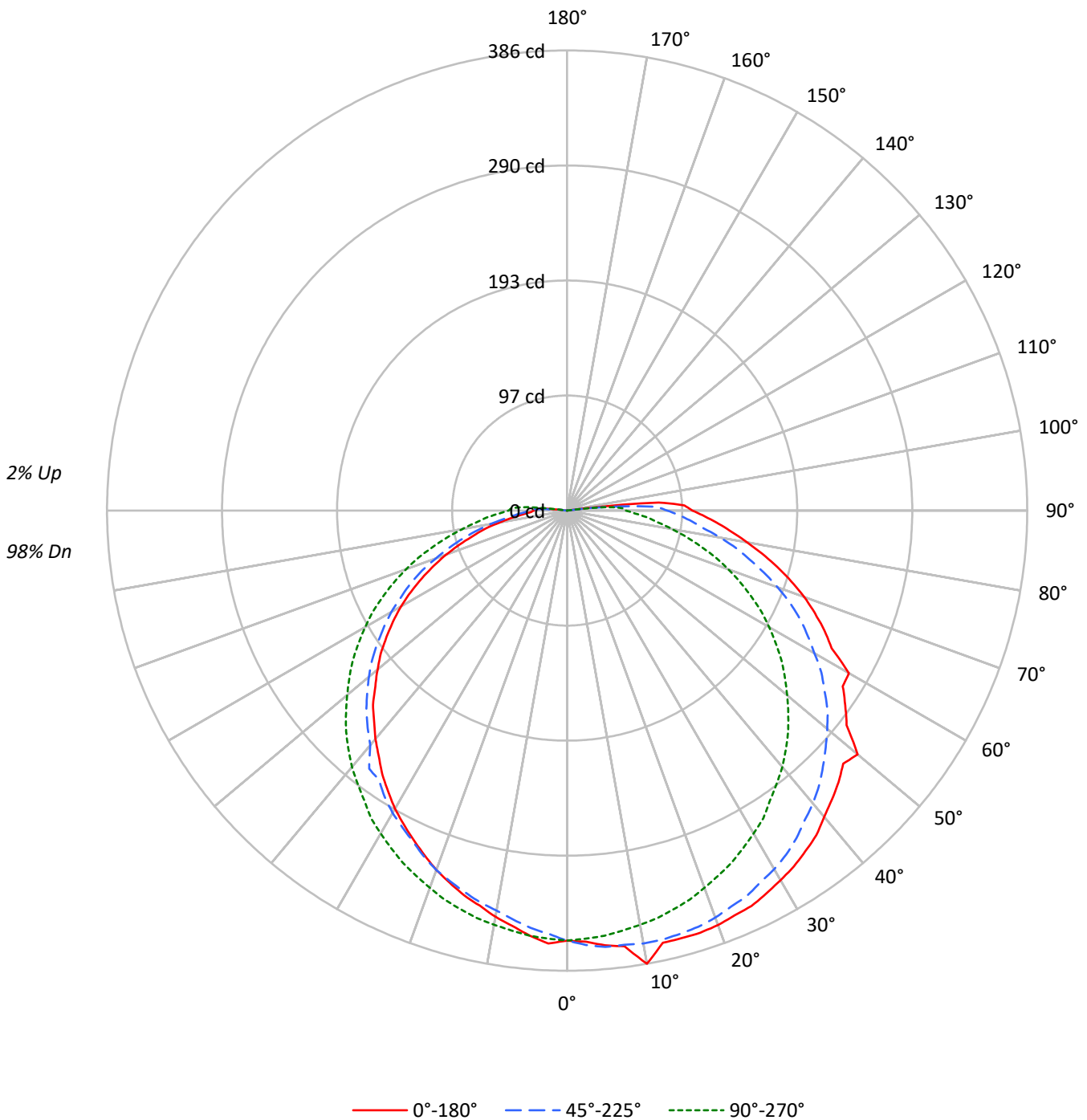
Lumens per Lamp: N/A  
Luminaire Lumens: 1316.7 lumens  
Efficiency: N/A  
Efficacy: 47.7 lumens/watt  
Spacing Criteria (0/90/45): 1.33 / 1.29 / 1.46  
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')  
CIE Type: Direct  
  
Input Watts (W): 27.6  
Input Voltage (V): NR  
Input Current (Ain): 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	118	118	118	118	115	115	115	115	110	110	110	105	105	105	100	100	100	98
1	106	100	95	90	103	97	92	88	92	89	85	88	85	82	84	81	79	77
2	95	86	78	71	92	83	76	70	79	73	68	76	71	66	72	68	64	62
3	86	74	65	58	83	72	64	57	69	62	56	66	60	55	63	58	53	51
4	78	65	56	48	76	64	55	48	61	53	47	58	51	46	56	50	45	43
5	72	58	48	41	69	57	48	41	54	46	40	52	45	39	50	44	39	36
6	66	52	42	36	64	51	42	35	49	41	35	47	40	34	45	39	34	31
7	61	47	38	31	59	46	37	31	44	36	31	42	35	30	41	35	30	28
8	57	43	34	28	55	42	33	27	40	33	27	39	32	27	37	31	26	24
9	53	39	31	25	52	38	30	25	37	30	24	36	29	24	35	28	24	22
10	50	36	28	22	48	35	27	22	34	27	22	33	26	22	32	26	22	20

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

	0°	90°	180°
0°	21530	21530	21530
5°	21432	20964	20964
10°	22349	20421	20039
15°	21420	19966	19274
20°	21430	19502	18581
25°	21448	19110	17861
30°	21393	18692	17258
35°	21423	18235	16601
40°	21370	17891	15941
45°	21482	17487	15360
50°	22435	16990	14642
55°	21485	16566	13956
60°	22311	15999	13162
65°	21431	15331	12092
70°	21346	14496	10875
75°	21109	13409	9403
80°	20992	12231	7843
85°	21680	11519	6328



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.2	2.6
10°-20°	98.9	7.5
20°-30°	153.1	11.6
30°-40°	191.5	14.5
40°-50°	209.3	15.9
50°-60°	205.1	15.6
60°-70°	178.2	13.5
70°-80°	132.3	10.1
80°-90°	82.9	6.3
90°-100°	31.2	2.4
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°	286.3	21.7
0°-40°	477.7	36.3
0°-60°	892.1	67.8
0°-90°	1285.5	97.6
90°-120°	31.2	2.4
90°-150°	31.2	2.4
90°-180°	31.0	2.4
0°-180°	1316.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	361	361	361	361	361	
5°	366	367	358	351	358	35
15°	371	367	346	331	334	106
25°	366	357	326	306	305	169
35°	349	335	297	276	270	218
45°	322	304	262	238	230	250
55°	285	264	220	194	185	258
65°	238	216	170	145	134	237
75°	182	158	116	90	81	193
85°	128	105	68	44	37	109
90°	105	84	49	32	28	58
95°	77	37	33	12	19	35
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°	360.7	360.7	360.7	360.7	360.7	360.7	360.7	360.7	360.7
2.5°	362.0	364.7	364.7	363.4	359.4	360.7	355.4	356.7	363.4
5°	366.0	367.4	367.4	363.4	358.0	358.0	351.4	351.4	358.0
7.5°	368.7	370.0	367.4	363.4	355.4	354.0	346.1	346.1	351.4
10°	386.0	371.3	368.7	362.0	352.7	350.1	340.7	342.1	346.1
12.5°	371.3	371.3	368.7	360.7	350.1	346.1	336.7	335.4	339.4
15°	371.3	371.3	367.4	358.0	346.1	342.1	331.4	330.1	334.1
17.5°	371.3	371.3	366.0	355.4	342.1	336.7	326.1	324.8	327.4
20°	370.0	370.0	363.4	351.4	336.7	331.4	320.8	318.1	320.8
22.5°	367.4	367.4	359.4	347.4	331.4	324.8	314.1	311.5	312.8
25°	366.0	364.7	356.7	342.1	326.1	319.4	306.1	304.8	304.8
27.5°	362.0	360.7	351.4	338.1	319.4	311.5	299.5	296.8	296.8
30°	358.0	356.7	347.4	331.4	312.8	304.8	292.8	288.8	288.8
32.5°	354.0	352.7	342.1	326.1	306.1	296.8	284.8	280.8	279.5
35°	348.7	347.4	335.4	318.1	296.8	287.5	275.5	272.9	270.2
37.5°	343.4	340.7	327.4	310.1	288.8	279.5	272.9	263.5	259.5
40°	335.4	334.1	320.8	302.1	280.8	274.2	256.9	255.5	250.2
42.5°	328.8	326.1	312.8	294.1	271.5	259.5	247.6	243.6	239.6
45°	322.1	318.1	303.5	284.8	262.2	250.2	238.2	232.9	230.3
47.5°	314.1	315.4	294.1	275.5	251.6	239.6	227.6	222.3	218.3
50°	318.1	302.1	284.8	264.9	240.9	228.9	217.0	211.6	207.6
52.5°	295.5	291.5	275.5	254.2	230.3	218.3	206.3	201.0	197.0
55°	284.8	280.8	263.5	243.6	219.6	206.3	194.3	189.0	185.0
57.5°	274.2	270.2	252.9	232.9	207.6	194.3	182.3	177.0	173.0
60°	272.9	258.2	239.6	220.9	195.7	182.3	170.4	169.0	161.0
62.5°	250.2	246.2	227.6	207.6	183.7	169.0	157.1	151.7	147.7
65°	238.2	234.3	215.6	194.3	170.4	155.7	145.1	138.4	134.4
67.5°	224.9	220.9	202.3	181.0	157.1	142.4	131.8	126.4	121.1
70°	211.6	207.6	187.7	167.7	143.7	129.1	117.1	111.8	107.8
72.5°	197.0	193.0	173.0	153.1	130.4	114.5	103.8	98.5	94.5
75°	182.3	178.4	158.4	139.8	115.8	101.2	90.5	85.2	81.2
77.5°	167.7	163.7	145.1	125.1	102.5	87.8	77.2	71.9	70.5
80°	153.1	149.1	130.4	110.5	89.2	74.5	65.2	59.9	57.2
82.5°	139.8	135.8	115.8	98.5	77.2	62.6	53.2	49.2	46.6
85°	127.8	122.5	105.1	86.5	67.9	51.9	43.9	38.6	37.3
87.5°	115.8	110.5	94.5	75.9	57.2	43.9	35.9	31.9	30.6
90°	105.1	99.8	83.9	66.5	49.2	38.6	31.9	29.3	28.0
92.5°	98.5	91.8	74.5	57.2	46.6	35.9	26.6	25.3	26.6
95°	77.2	57.2	37.3	35.9	33.3	20.0	12.0	14.6	18.6
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)