

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: P130089

Luminaire Tested: **HL618TAT - HLM6935 - HL6NFL - 71PS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P130089
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33476)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HL618TAT - HLM6935 - HL6NFL - 71PS
Description: HALO ALLSLOPE 6" 30W, Drop Opal Glass Lens, White Polymer Trim Ring
"Dead Front", Wet Location - Showerlight using 25 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: 1134.7 lumens
Efficiency: N/A
Efficacy: 41.1 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

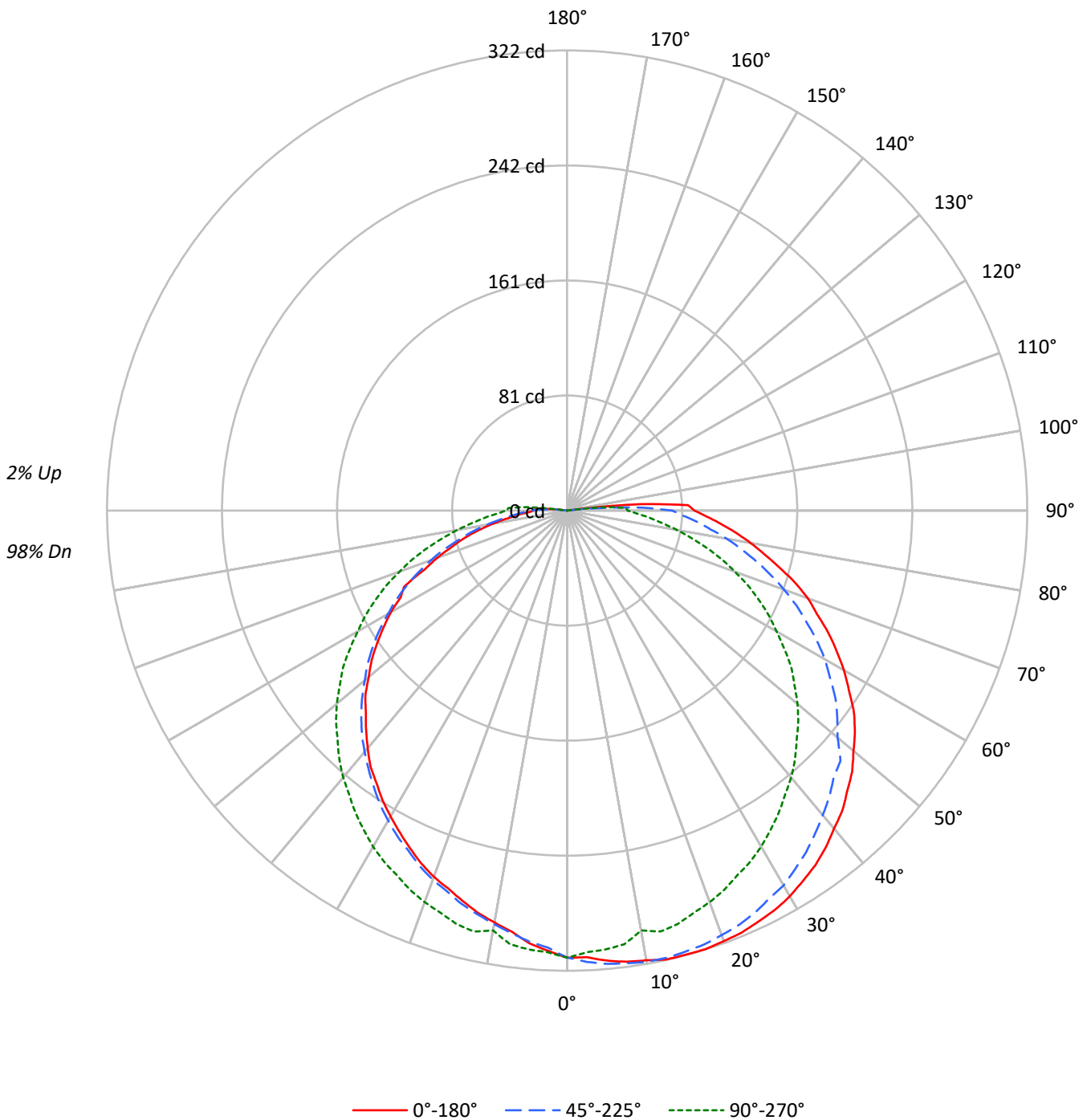
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	119	119	119	119	116	116	116	116	110	110	110	105	105	105	100	100	100	98
1	106	100	95	90	103	97	93	88	93	89	85	88	85	82	84	82	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	73	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	52	46	56	50	45	43
5	72	58	48	41	70	57	48	41	54	46	40	52	45	40	50	44	39	37
6	66	52	42	36	64	51	42	35	49	41	35	47	40	34	45	39	34	32
7	61	47	38	31	59	46	37	31	44	36	31	43	36	30	41	35	30	28
8	57	43	34	28	55	42	33	28	40	33	27	39	32	27	38	31	27	25
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	28	22	34	27	22	33	27	22	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	18671	18671	18671
5°	18510	18053	17796
10°	18499	17271	16947
15°	18559	17272	16309
20°	18569	16889	15795
25°	18588	16502	15265
30°	18626	16230	14766
35°	18603	15863	14290
40°	18509	15534	13832
45°	18487	15146	13285
50°	18450	14839	12794
55°	18475	14447	12259
60°	18289	13833	11650
65°	18129	13316	11318
70°	18077	12579	9765
75°	17786	11730	8638
80°	17852	10681	7171
85°	18321	9822	5853



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.6	2.6
10°-20°	85.5	7.5
20°-30°	132.7	11.7
30°-40°	165.7	14.6
40°-50°	181.0	16.0
50°-60°	177.0	15.6
60°-70°	153.4	13.5
70°-80°	114.2	10.1
80°-90°	71.2	6.3
90°-100°	24.1	2.1
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°	247.9	21.8
0°-40°	413.6	36.5
0°-60°	771.6	68.0
0°-90°	1110.6	97.9
90°-120°	24.1	2.1
90°-150°	24.1	2.1
90°-180°	24.0	2.1
0°-180°	1134.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	313	313	313	313	313	
5°	316	318	308	303	304	30
15°	322	320	299	285	283	91
25°	317	311	282	263	260	147
35°	303	292	258	236	233	190
45°	277	264	227	204	199	214
55°	245	229	192	166	162	218
65°	202	185	148	124	126	199
75°	154	137	101	78	75	163
85°	108	91	58	38	34	93
90°	89	74	42	26	23	49
95°	51	13	28	6	14	26
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°	312.8	312.8	312.8	312.8	312.8	312.8	312.8	312.8	312.8
2.5°	312.8	319.5	316.1	311.7	309.4	315.0	306.1	310.6	308.3
5°	316.1	321.7	318.4	319.5	308.3	312.8	302.8	307.2	303.9
7.5°	318.4	323.9	319.5	311.7	306.1	308.3	298.3	301.7	297.2
10°	319.5	326.1	320.6	311.7	298.3	305.0	293.9	296.1	292.7
12.5°	321.7	327.3	320.6	303.9	301.7	301.7	289.4	291.6	288.3
15°	321.7	327.3	319.5	308.3	299.4	297.2	285.0	287.2	282.7
17.5°	321.7	320.6	318.4	306.1	295.0	292.7	279.4	281.6	277.2
20°	320.6	325.0	316.1	302.8	291.6	287.2	274.9	276.1	272.7
22.5°	319.5	323.9	313.9	299.4	287.2	281.6	269.4	269.4	267.1
25°	317.2	321.7	310.6	295.0	281.6	276.1	262.7	263.8	260.5
27.5°	315.0	318.4	306.1	290.5	277.2	270.5	257.1	257.1	253.8
30°	311.7	315.0	302.8	285.0	271.6	263.8	250.5	250.5	247.1
32.5°	307.2	309.4	297.2	279.4	264.9	257.1	243.8	243.8	240.4
35°	302.8	305.0	291.6	273.8	258.2	249.3	236.0	236.0	232.6
37.5°	297.2	299.4	285.0	267.1	250.5	241.5	228.2	228.2	226.0
40°	290.5	292.7	278.3	259.4	243.8	233.8	220.4	219.3	217.1
42.5°	285.0	286.1	271.6	252.7	236.0	224.8	212.6	210.4	208.2
45°	277.2	273.8	263.8	244.9	227.1	217.1	203.7	202.6	199.2
47.5°	270.5	271.6	259.4	236.0	219.3	207.0	194.8	193.7	191.5
50°	261.6	262.7	247.1	228.2	210.4	198.1	184.8	184.8	181.4
52.5°	253.8	252.7	238.2	217.1	200.4	188.1	175.9	174.8	172.5
55°	244.9	244.9	229.3	208.2	191.5	178.1	165.9	164.7	162.5
57.5°	233.8	233.8	218.2	198.1	180.3	168.1	155.8	154.7	152.5
60°	223.7	222.6	208.2	188.1	169.2	156.9	144.7	143.6	142.5
62.5°	212.6	211.5	197.0	177.0	159.2	145.8	134.7	132.5	131.3
65°	201.5	200.4	184.8	165.9	148.0	134.7	123.6	121.3	125.8
67.5°	189.2	188.1	173.6	154.7	136.9	123.6	112.4	110.2	108.0
70°	179.2	177.0	161.4	142.5	124.7	111.3	101.3	99.1	96.8
72.5°	167.0	164.7	149.2	130.2	113.5	100.2	90.2	86.8	84.6
75°	153.6	151.4	136.9	118.0	101.3	87.9	77.9	75.7	74.6
77.5°	141.4	139.1	124.7	106.9	89.0	75.7	67.9	64.6	63.4
80°	130.2	125.8	113.5	94.6	77.9	64.6	56.8	53.4	52.3
82.5°	119.1	114.7	101.3	83.5	66.8	53.4	46.8	43.4	42.3
85°	108.0	103.5	91.3	73.5	57.9	45.6	37.8	34.5	34.5
87.5°	98.0	93.5	81.3	64.6	49.0	37.8	31.2	27.8	26.7
90°	89.0	85.7	73.5	57.9	42.3	32.3	25.6	23.4	23.4
92.5°	84.6	74.6	49.0	46.8	41.2	28.9	17.8	21.1	22.3
95°	51.2	42.3	13.4	23.4	27.8	16.7	5.6	11.1	14.5
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)