

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: P130222

Luminaire Tested: **HL612ICAT - HLM6927 - HL6NFL - 71PS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P130222
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: HL612ICAT - HLM6927 - HL6NFL - 71PS
Description: HALO ALLSLOPE 6" 21W, 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 / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 742.8 lumens
Efficiency: N/A
Efficacy: 38.9 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

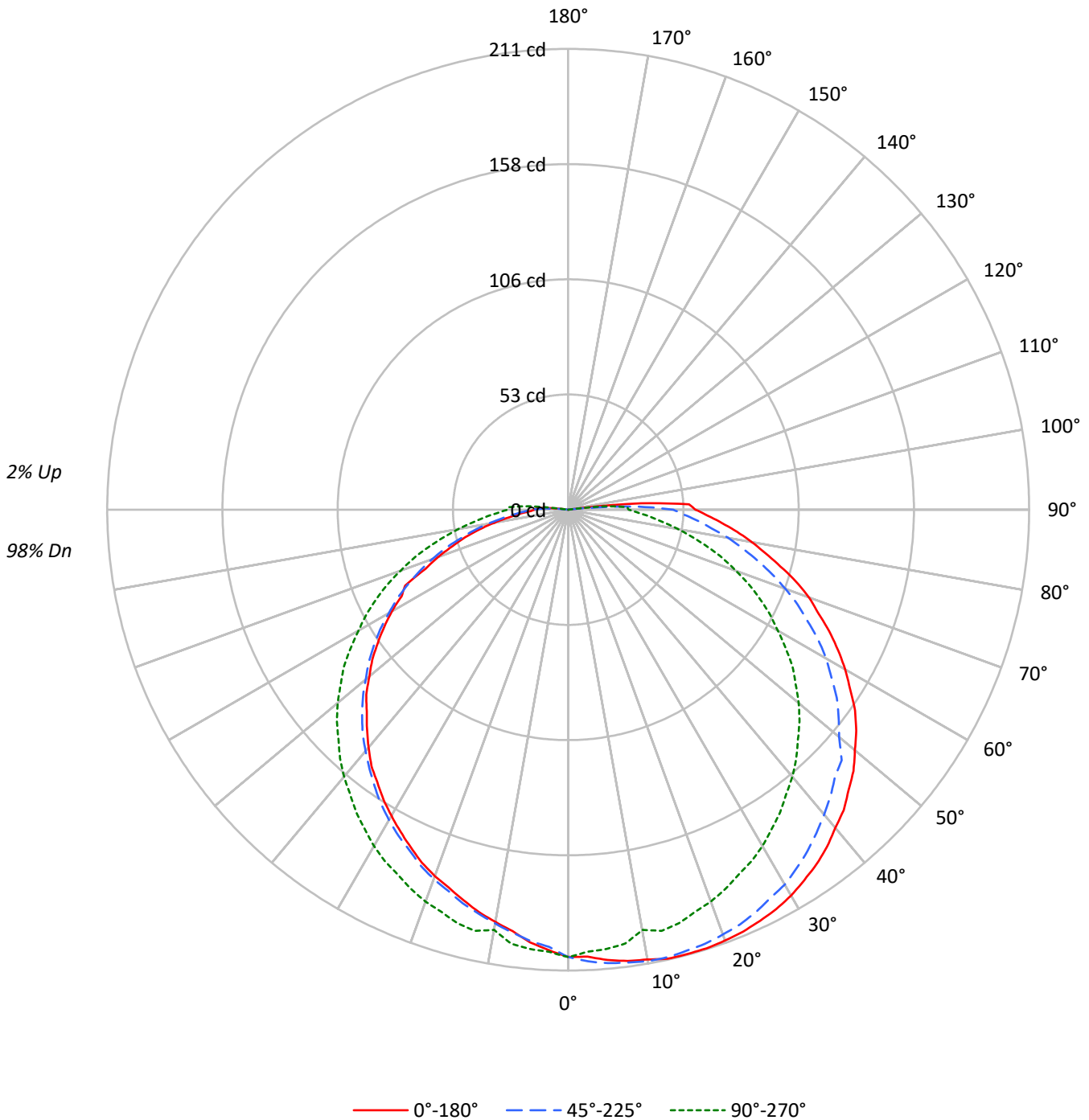
Input Watts (W): 19.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	39	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°	12225	12225	12225
5°	12121	11823	11647
10°	12107	11308	11099
15°	12149	11307	10678
20°	12157	11057	10339
25°	12171	10806	9991
30°	12190	10625	9669
35°	12177	10389	9357
40°	12119	10169	9054
45°	12105	9917	8697
50°	12081	9712	8379
55°	12093	9453	8027
60°	11977	9058	7628
65°	11867	8718	7405
70°	11833	8232	6396
75°	11649	7677	5651
80°	11696	6993	4703
85°	11994	6429	3834



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	19.4	2.6
10°-20°	56.0	7.5
20°-30°	86.9	11.7
30°-40°	108.5	14.6
40°-50°	118.5	16.0
50°-60°	115.9	15.6
60°-70°	100.5	13.5
70°-80°	74.8	10.1
80°-90°	46.6	6.3
90°-100°	15.8	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°	162.3	21.8
0°-40°	270.8	36.5
0°-60°	505.2	68.0
0°-90°	727.1	97.9
90°-120°	15.8	2.1
90°-150°	15.8	2.1
90°-180°	16.0	2.2
0°-180°	742.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	205	205	205	205	205	
5°	207	208	202	198	199	20
15°	211	209	196	187	185	60
25°	208	203	184	172	170	96
35°	198	191	169	154	152	124
45°	182	173	149	133	130	140
55°	160	150	125	109	106	143
65°	132	121	97	81	82	131
75°	101	90	66	51	49	107
85°	71	60	38	25	23	61
90°	58	48	28	17	15	32
95°	34	9	18	4	10	17
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°	204.8	204.8	204.8	204.8	204.8	204.8	204.8	204.8	204.8
2.5°	204.8	209.1	207.0	204.0	202.6	206.2	200.4	203.3	201.9
5°	207.0	210.6	208.4	209.1	201.9	204.8	198.2	201.1	198.9
7.5°	208.4	212.1	209.1	204.0	200.4	201.9	195.3	197.5	194.6
10°	209.1	213.5	209.9	204.0	195.3	199.7	192.4	193.8	191.7
12.5°	210.6	214.2	209.9	198.9	197.5	197.5	189.5	190.9	188.7
15°	210.6	214.2	209.1	201.9	196.0	194.6	186.6	188.0	185.1
17.5°	210.6	209.9	208.4	200.4	193.1	191.7	182.9	184.4	181.5
20°	209.9	212.8	207.0	198.2	190.9	188.0	180.0	180.7	178.5
22.5°	209.1	212.1	205.5	196.0	188.0	184.4	176.4	176.4	174.9
25°	207.7	210.6	203.3	193.1	184.4	180.7	172.0	172.7	170.5
27.5°	206.2	208.4	200.4	190.2	181.5	177.1	168.3	168.3	166.2
30°	204.0	206.2	198.2	186.6	177.8	172.7	164.0	164.0	161.8
32.5°	201.1	202.6	194.6	182.9	173.4	168.3	159.6	159.6	157.4
35°	198.2	199.7	190.9	179.3	169.1	163.2	154.5	154.5	152.3
37.5°	194.6	196.0	186.6	174.9	164.0	158.1	149.4	149.4	147.9
40°	190.2	191.7	182.2	169.8	159.6	153.0	144.3	143.6	142.1
42.5°	186.6	187.3	177.8	165.4	154.5	147.2	139.2	137.7	136.3
45°	181.5	179.3	172.7	160.3	148.7	142.1	133.4	132.6	130.4
47.5°	177.1	177.8	169.8	154.5	143.6	135.5	127.5	126.8	125.3
50°	171.3	172.0	161.8	149.4	137.7	129.7	121.0	121.0	118.8
52.5°	166.2	165.4	156.0	142.1	131.2	123.2	115.1	114.4	113.0
55°	160.3	160.3	150.1	136.3	125.3	116.6	108.6	107.9	106.4
57.5°	153.0	153.0	142.8	129.7	118.1	110.0	102.0	101.3	99.8
60°	146.5	145.7	136.3	123.2	110.8	102.8	94.7	94.0	93.3
62.5°	139.2	138.5	129.0	115.9	104.2	95.5	88.2	86.7	86.0
65°	131.9	131.2	121.0	108.6	96.9	88.2	80.9	79.4	82.3
67.5°	123.9	123.2	113.7	101.3	89.6	80.9	73.6	72.1	70.7
70°	117.3	115.9	105.7	93.3	81.6	72.9	66.3	64.9	63.4
72.5°	109.3	107.9	97.7	85.3	74.3	65.6	59.0	56.8	55.4
75°	100.6	99.1	89.6	77.2	66.3	57.6	51.0	49.6	48.8
77.5°	92.6	91.1	81.6	70.0	58.3	49.6	44.5	42.3	41.5
80°	85.3	82.3	74.3	61.9	51.0	42.3	37.2	35.0	34.3
82.5°	78.0	75.1	66.3	54.7	43.7	35.0	30.6	28.4	27.7
85°	70.7	67.8	59.8	48.1	37.9	29.9	24.8	22.6	22.6
87.5°	64.1	61.2	53.2	42.3	32.1	24.8	20.4	18.2	17.5
90°	58.3	56.1	48.1	37.9	27.7	21.1	16.8	15.3	15.3
92.5°	55.4	48.8	32.1	30.6	27.0	18.9	11.7	13.8	14.6
95°	33.5	27.7	8.7	15.3	18.2	10.9	3.6	7.3	9.5
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)