

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: P130272

Luminaire Tested: **HL612ICAT - HLM6935 - HL6WFL - ERT702**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P130272
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: HL612ICAT - HLM6935 - HL6WFL - ERT702
Description: HALO ALLSLOPE 6" 21W, 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 / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1226.3 lumens
Efficiency: N/A
Efficacy: 64.2 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

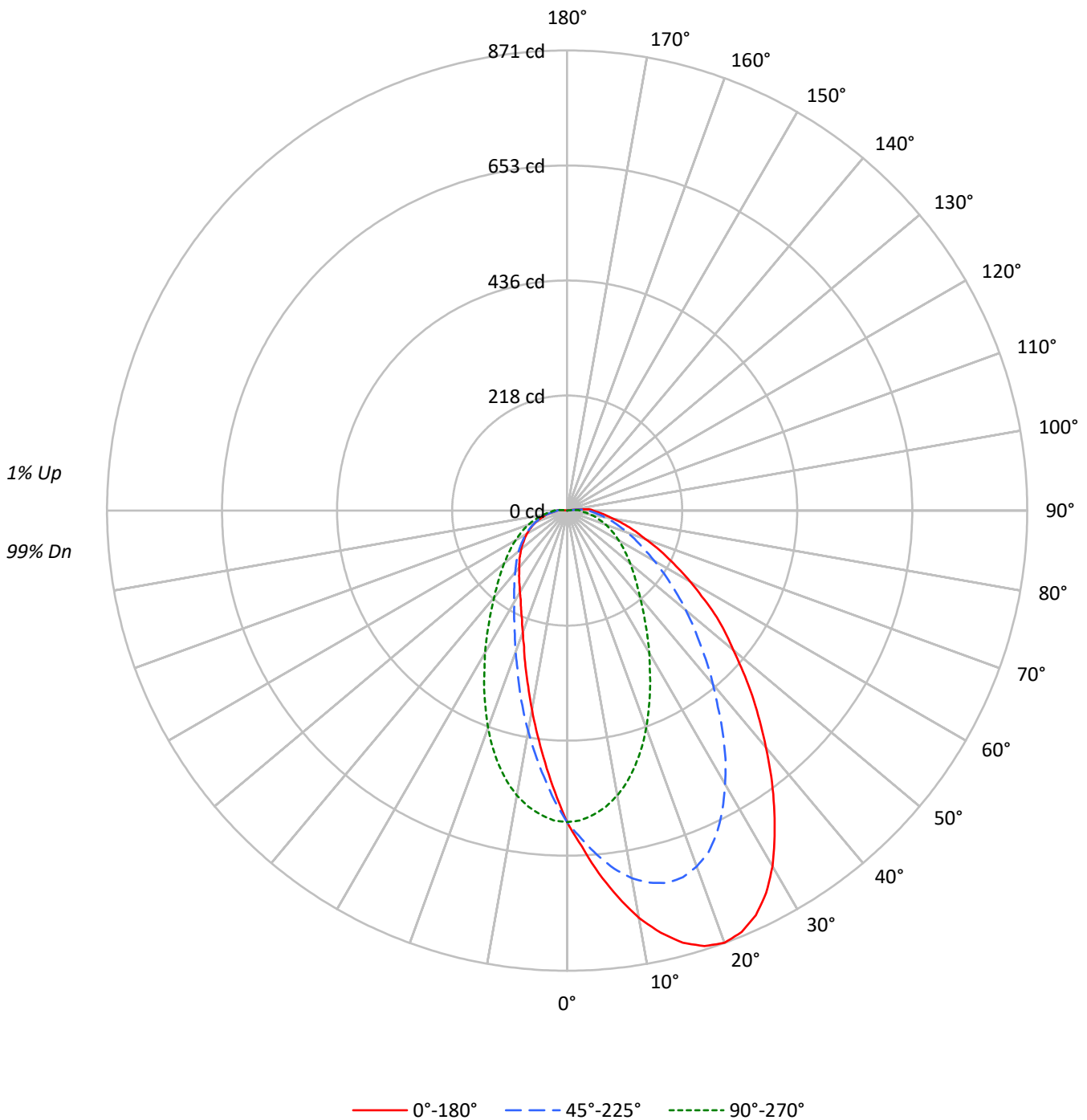
Input Watts (W): 19.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	35194	35194	35194
5°	40369	33829	28037
10°	45323	31700	22158
15°	48857	28787	17589
20°	50431	25346	14214
25°	49523	21782	12072
30°	46449	18549	10667
35°	41962	15808	9732
40°	37273	13711	8984
45°	33033	12152	8490
50°	28931	10974	8005
55°	25695	10018	7529
60°	22008	9206	7186
65°	18777	8484	6757
70°	15888	7848	6285
75°	14000	7098	5616
80°	12052	6280	4895
85°	11179	5429	4190



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.0	4.5
10°-20°	150.9	12.3
20°-30°	207.0	16.9
30°-40°	213.9	17.4
40°-50°	190.8	15.6
50°-60°	156.1	12.7
60°-70°	116.0	9.5
70°-80°	77.4	6.3
80°-90°	43.9	3.6
90°-100°	15.3	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°	412.9	33.7
0°-40°	626.7	51.1
0°-60°	973.6	79.4
0°-90°	1211.0	98.8
90°-120°	15.3	1.2
90°-150°	15.3	1.2
90°-180°	15.0	1.2
0°-180°	1226.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	590	590	590	590	590	
5°	689	655	578	505	479	69
15°	847	730	499	349	305	239
25°	845	672	372	236	206	386
35°	683	514	257	174	158	426
45°	495	355	182	136	127	382
55°	341	238	133	104	100	304
65°	209	152	94	77	75	209
75°	121	95	61	49	48	129
85°	66	53	32	25	25	59
90°	49	40	25	19	19	27
95°	29	23	13	9	10	14
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°	589.6	589.6	589.6	589.6	589.6	589.6	589.6	589.6	589.6
2.5°	636.3	626.2	621.7	606.1	586.9	572.2	549.3	542.0	532.8
5°	689.4	673.8	654.6	619.8	577.7	543.8	505.4	490.7	478.8
7.5°	737.9	718.7	683.9	627.2	564.9	512.7	464.2	441.3	428.5
10°	782.8	757.2	706.8	629.0	547.5	479.7	423.9	397.3	382.7
12.5°	818.5	788.3	721.5	624.4	525.5	444.0	385.4	353.4	340.6
15°	846.9	811.2	729.7	613.4	499.0	411.1	348.8	316.8	304.9
17.5°	864.3	824.0	727.9	594.2	469.7	375.4	313.1	283.8	271.0
20°	870.7	825.8	716.9	570.4	437.6	344.2	284.7	258.2	245.4
22.5°	863.4	815.8	699.5	542.9	403.8	313.1	258.2	234.4	223.4
25°	845.1	796.5	672.0	510.0	371.7	285.7	236.2	215.2	206.0
27.5°	815.8	766.3	637.2	475.2	338.8	260.9	217.0	198.7	190.4
30°	777.3	727.9	597.9	437.6	310.4	239.0	199.6	184.9	178.5
32.5°	730.6	683.0	557.6	401.0	282.9	220.6	186.8	173.0	167.5
35°	683.0	636.3	513.6	364.4	257.3	203.3	174.0	163.0	158.4
37.5°	634.5	591.4	468.8	331.4	235.3	187.7	163.0	153.8	149.2
40°	585.0	544.8	429.4	300.3	215.2	174.0	152.9	145.6	141.0
42.5°	539.3	499.0	391.9	272.8	197.8	162.1	143.7	137.3	133.7
45°	495.3	457.8	355.2	248.1	182.2	151.1	135.5	130.0	127.3
47.5°	451.4	417.5	324.1	226.1	168.5	141.0	127.3	122.7	119.9
50°	410.2	380.0	293.0	205.1	155.6	131.8	119.9	115.4	113.5
52.5°	376.3	345.2	264.6	186.8	143.7	122.7	111.7	109.0	107.1
55°	340.6	309.5	238.0	170.3	132.8	114.4	104.4	101.6	99.8
57.5°	302.1	277.4	213.3	154.7	122.7	106.2	97.0	95.2	94.3
60°	269.2	247.2	190.4	141.9	112.6	98.0	90.6	88.8	87.9
62.5°	237.1	218.8	170.3	128.2	103.5	90.6	83.3	81.5	81.5
65°	208.7	192.3	152.0	116.3	94.3	83.3	76.9	76.0	75.1
67.5°	184.0	168.5	136.4	105.3	86.1	74.2	69.6	69.6	68.7
70°	157.5	148.3	120.9	95.2	77.8	67.8	63.2	62.3	62.3
72.5°	139.2	130.0	107.1	85.1	69.6	60.4	56.8	56.8	55.8
75°	120.9	113.5	95.2	76.0	61.3	54.0	49.4	49.4	48.5
77.5°	104.4	98.9	83.3	66.8	54.0	46.7	43.0	43.0	42.1
80°	87.9	86.1	72.3	57.7	45.8	39.4	37.5	36.6	35.7
82.5°	76.9	74.2	63.2	49.4	38.5	33.0	30.2	30.2	30.2
85°	65.9	63.2	53.1	42.1	32.0	27.5	24.7	24.7	24.7
87.5°	56.8	54.9	45.8	35.7	27.5	22.9	21.1	21.1	21.1
90°	49.4	47.6	40.3	31.1	24.7	20.1	19.2	19.2	19.2
92.5°	44.9	42.1	35.7	25.6	21.1	18.3	16.5	15.6	17.4
95°	29.3	25.6	22.9	14.6	12.8	10.1	9.2	8.2	10.1
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)