

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: P130273

Luminaire Tested: **HL612ICAT - HLM6940 - HL6WFL - ERT702**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P130273  
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 - HLM6940 - 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 / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

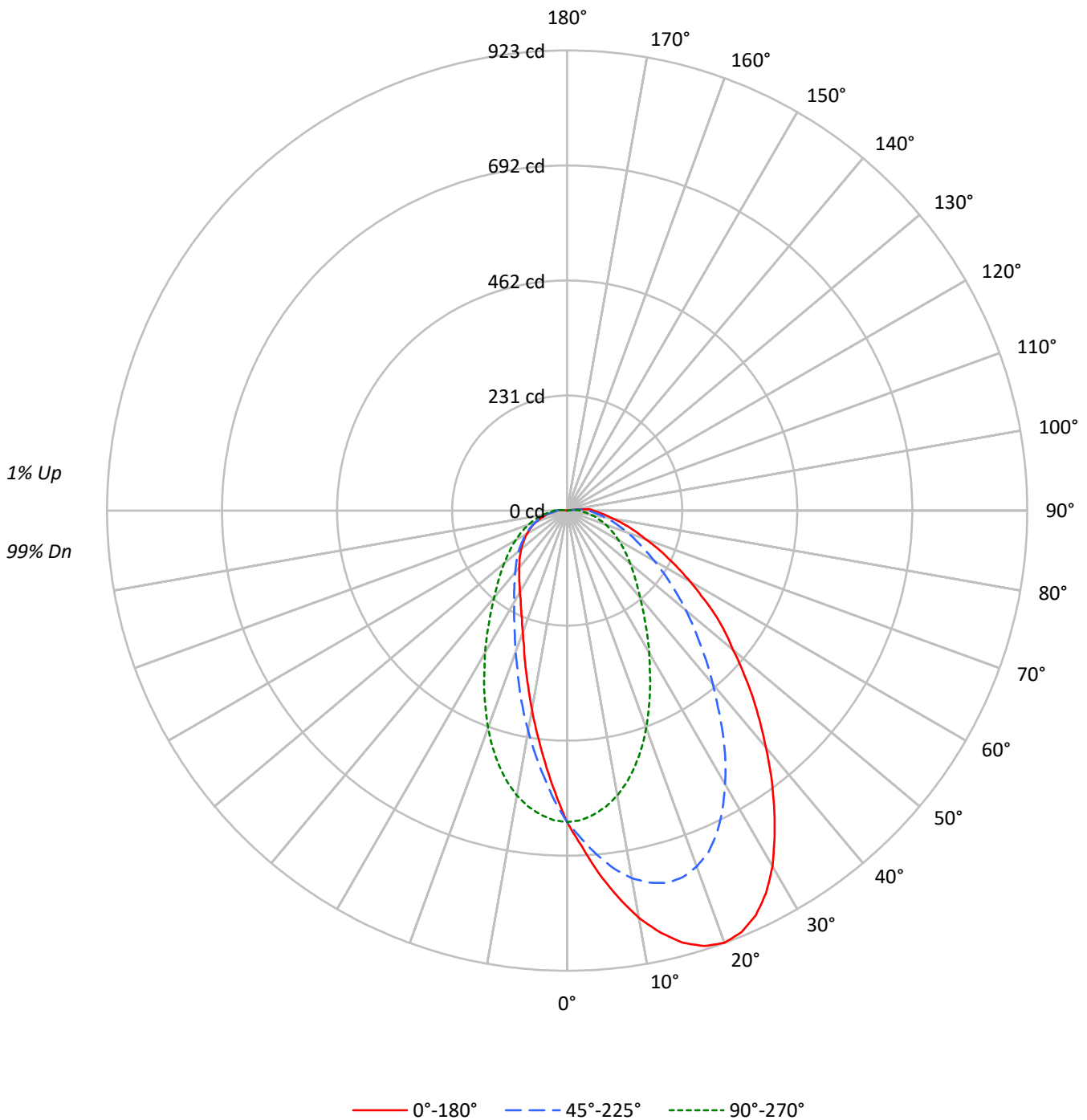
Lumens per Lamp: N/A  
Luminaire Lumens: 1299.4 lumens  
Efficiency: N/A  
Efficacy: 68.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.89 / 1.13  
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')  
CIE Type: Direct  
  
Input Watts (W): 19.1  
Input Voltage (V): NR  
Input Current (Ain): 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°	37295	37295	37295
5°	42776	35843	29712
10°	48021	33587	23478
15°	51770	30500	18634
20°	53437	26857	15059
25°	52471	23083	12792
30°	49216	19654	11306
35°	44463	16748	10309
40°	39497	14527	9519
45°	35001	12879	8990
50°	30651	11630	8485
55°	27226	10614	7974
60°	23316	9753	7611
65°	19902	8988	7153
70°	16836	8322	6658
75°	14833	7527	5952
80°	12765	6650	5183
85°	11841	5768	4445



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.3	4.5
10°-20°	159.9	12.3
20°-30°	219.3	16.9
30°-40°	226.6	17.4
40°-50°	202.1	15.6
50°-60°	165.4	12.7
60°-70°	122.9	9.5
70°-80°	82.1	6.3
80°-90°	46.5	3.6
90°-100°	16.2	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°	437.5	33.7
0°-40°	664.1	51.1
0°-60°	1031.6	79.4
0°-90°	1283.2	98.8
90°-120°	16.2	1.2
90°-150°	16.2	1.2
90°-180°	16.0	1.2
0°-180°	1299.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	625	625	625	625	625	
5°	730	694	612	536	507	73
15°	897	773	529	370	323	253
25°	895	712	394	250	218	409
35°	724	544	273	184	168	452
45°	525	376	193	144	135	405
55°	361	252	141	111	106	322
65°	221	161	100	82	80	221
75°	128	101	65	52	51	136
85°	70	56	34	26	26	62
90°	52	43	26	20	20	29
95°	31	24	14	10	11	15
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°	624.8	624.8	624.8	624.8	624.8	624.8	624.8	624.8	624.8
2.5°	674.2	663.6	658.7	642.2	621.8	606.3	582.1	574.3	564.6
5°	730.5	714.0	693.6	656.8	612.1	576.2	535.5	520.0	507.4
7.5°	781.9	761.5	724.7	664.5	598.6	543.3	491.8	467.6	454.0
10°	829.4	802.3	748.9	666.5	580.1	508.3	449.2	421.0	405.5
12.5°	867.3	835.3	764.5	661.6	556.8	470.5	408.4	374.5	360.9
15°	897.4	859.5	773.2	650.0	528.7	435.6	369.6	335.7	323.0
17.5°	915.8	873.1	771.2	629.6	497.7	397.7	331.8	300.7	287.2
20°	922.6	875.0	759.6	604.4	463.7	364.8	301.7	273.6	260.0
22.5°	914.8	864.4	741.2	575.3	427.8	331.8	273.6	248.3	236.7
25°	895.4	844.0	712.1	540.4	393.9	302.7	250.3	228.0	218.3
27.5°	864.4	812.0	675.2	503.5	358.9	276.5	229.9	210.5	201.8
30°	823.6	771.2	633.5	463.7	328.9	253.2	211.5	196.0	189.2
32.5°	774.2	723.7	590.8	424.9	299.8	233.8	197.9	183.4	177.5
35°	723.7	674.2	544.2	386.1	272.6	215.4	184.3	172.7	167.8
37.5°	672.3	626.7	496.7	351.2	249.3	198.9	172.7	163.0	158.1
40°	619.9	577.2	455.0	318.2	228.0	184.3	162.0	154.2	149.4
42.5°	571.4	528.7	415.2	289.1	209.5	171.7	152.3	145.5	141.6
45°	524.8	485.1	376.4	262.9	193.1	160.1	143.6	137.8	134.8
47.5°	478.3	442.4	343.4	239.6	178.5	149.4	134.8	130.0	127.1
50°	434.6	402.6	310.4	217.3	164.9	139.7	127.1	122.2	120.3
52.5°	398.7	365.7	280.4	197.9	152.3	130.0	118.4	115.4	113.5
55°	360.9	327.9	252.2	180.4	140.7	121.3	110.6	107.7	105.7
57.5°	320.1	293.9	226.0	163.9	130.0	112.5	102.8	100.9	99.9
60°	285.2	261.9	201.8	150.4	119.3	103.8	96.0	94.1	93.1
62.5°	251.3	231.9	180.4	135.8	109.6	96.0	88.3	86.3	86.3
65°	221.2	203.7	161.0	123.2	99.9	88.3	81.5	80.5	79.5
67.5°	195.0	178.5	144.5	111.6	91.2	78.6	73.7	73.7	72.8
70°	166.9	157.2	128.1	100.9	82.5	71.8	66.9	66.0	66.0
72.5°	147.5	137.8	113.5	90.2	73.7	64.0	60.1	60.1	59.2
75°	128.1	120.3	100.9	80.5	65.0	57.2	52.4	52.4	51.4
77.5°	110.6	104.8	88.3	70.8	57.2	49.5	45.6	45.6	44.6
80°	93.1	91.2	76.6	61.1	48.5	41.7	39.8	38.8	37.8
82.5°	81.5	78.6	66.9	52.4	40.7	34.9	32.0	32.0	32.0
85°	69.8	66.9	56.3	44.6	34.0	29.1	26.2	26.2	26.2
87.5°	60.1	58.2	48.5	37.8	29.1	24.3	22.3	22.3	22.3
90°	52.4	50.4	42.7	33.0	26.2	21.3	20.4	20.4	20.4
92.5°	47.5	44.6	37.8	27.2	22.3	19.4	17.5	16.5	18.4
95°	31.0	27.2	24.3	15.5	13.6	10.7	9.7	8.7	10.7
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)