

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: P130270

Luminaire Tested: **HL612ICAT - HLM6927 - HL6WFL - ERT702**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P130270  
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 - HLM6927 - 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 / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

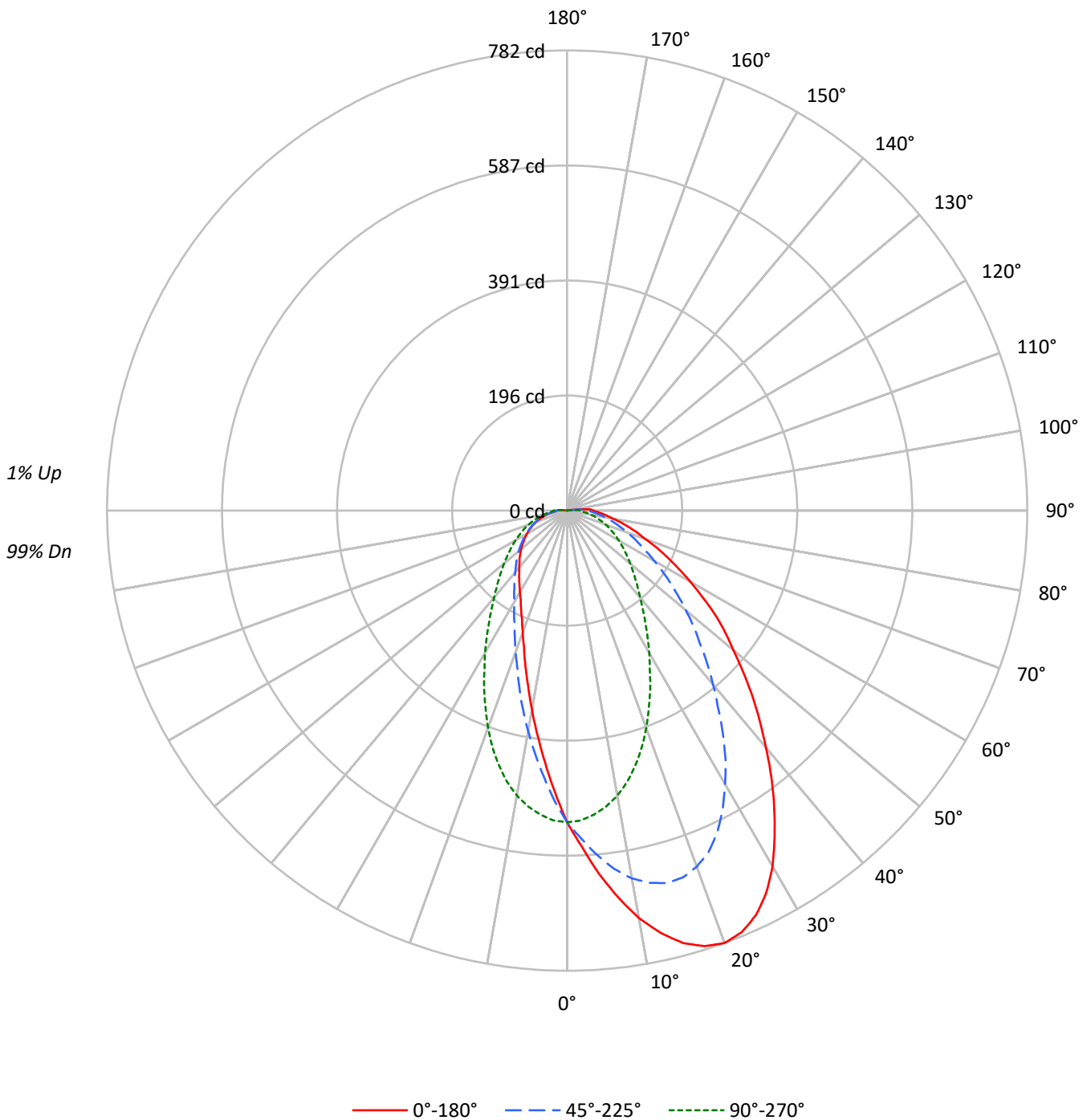
Lumens per Lamp: N/A  
Luminaire Lumens: 1101.3 lumens  
Efficiency: N/A  
Efficacy: 57.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.89 / 1.13  
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')  
CIE Type: Direct  
  
Input Watts (W): 19.1  
Input Voltage (V): NR  
Input Current (Ain): 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	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°	31606	31606	31606
5°	36253	30380	25180
10°	40703	28469	19900
15°	43878	25850	15795
20°	45293	22762	12766
25°	44472	19561	10841
30°	41717	16654	9579
35°	37686	14198	8736
40°	33476	12310	8066
45°	29665	10911	7623
50°	25983	9860	7194
55°	23077	8992	6759
60°	19760	8265	6450
65°	16870	7621	6064
70°	14264	7051	5639
75°	12564	6380	5049
80°	10818	5635	4401
85°	10043	4886	3766



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.4	4.5
10°-20°	135.5	12.3
20°-30°	185.9	16.9
30°-40°	192.1	17.4
40°-50°	171.3	15.6
50°-60°	140.2	12.7
60°-70°	104.2	9.5
70°-80°	69.6	6.3
80°-90°	39.5	3.6
90°-100°	13.7	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°	370.8	33.7
0°-40°	562.9	51.1
0°-60°	874.4	79.4
0°-90°	1087.6	98.8
90°-120°	13.7	1.2
90°-150°	13.7	1.2
90°-180°	14.0	1.3
0°-180°	1101.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	530	530	530	530	530	
5°	619	588	519	454	430	62
15°	761	655	448	313	274	215
25°	759	604	334	212	185	347
35°	613	461	231	156	142	383
45°	445	319	164	122	114	343
55°	306	214	119	94	90	273
65°	188	136	85	69	67	187
75°	108	86	55	44	44	115
85°	59	48	29	22	22	53
90°	44	36	22	17	17	25
95°	26	21	12	8	9	13
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°	529.5	529.5	529.5	529.5	529.5	529.5	529.5	529.5	529.5
2.5°	571.5	562.4	558.3	544.3	527.1	513.9	493.3	486.8	478.5
5°	619.1	605.2	587.9	556.7	518.8	488.4	453.9	440.7	430.0
7.5°	662.7	645.5	614.2	563.2	507.3	460.5	416.9	396.3	384.8
10°	703.0	680.0	634.8	564.9	491.7	430.9	380.7	356.9	343.7
12.5°	735.1	708.0	647.9	560.8	472.0	398.8	346.2	317.4	305.9
15°	760.6	728.5	655.3	550.9	448.1	369.2	313.3	284.5	273.8
17.5°	776.2	740.0	653.7	533.6	421.8	337.1	281.2	254.9	243.4
20°	782.0	741.7	643.8	512.3	393.0	309.2	255.7	231.9	220.4
22.5°	775.4	732.6	628.2	487.6	362.6	281.2	231.9	210.5	200.6
25°	758.9	715.4	603.5	458.0	333.8	256.5	212.1	193.2	185.0
27.5°	732.6	688.2	572.3	426.7	304.2	234.3	194.9	178.4	171.0
30°	698.1	653.7	536.9	393.0	278.7	214.6	179.2	166.1	160.3
32.5°	656.2	613.4	500.7	360.1	254.1	198.2	167.7	155.4	150.5
35°	613.4	571.5	461.3	327.3	231.1	182.5	156.2	146.4	142.2
37.5°	569.8	531.2	421.0	297.7	211.3	168.6	146.4	138.1	134.0
40°	525.4	489.2	385.6	269.7	193.2	156.2	137.3	130.7	126.6
42.5°	484.3	448.1	351.9	245.0	177.6	145.5	129.1	123.3	120.0
45°	444.8	411.1	319.0	222.8	163.6	135.7	121.7	116.8	114.3
47.5°	405.4	374.9	291.1	203.1	151.3	126.6	114.3	110.2	107.7
50°	368.4	341.2	263.1	184.2	139.8	118.4	107.7	103.6	102.0
52.5°	337.9	310.0	237.6	167.7	129.1	110.2	100.3	97.8	96.2
55°	305.9	277.9	213.8	152.9	119.2	102.8	93.7	91.3	89.6
57.5°	271.3	249.1	191.6	139.0	110.2	95.4	87.2	85.5	84.7
60°	241.7	222.0	171.0	127.4	101.1	88.0	81.4	79.8	78.9
62.5°	213.0	196.5	152.9	115.1	92.9	81.4	74.8	73.2	73.2
65°	187.5	172.7	136.5	104.4	84.7	74.8	69.1	68.2	67.4
67.5°	165.3	151.3	122.5	94.6	77.3	66.6	62.5	62.5	61.7
70°	141.4	133.2	108.5	85.5	69.9	60.8	56.7	55.9	55.9
72.5°	125.0	116.8	96.2	76.5	62.5	54.3	51.0	51.0	50.2
75°	108.5	102.0	85.5	68.2	55.1	48.5	44.4	44.4	43.6
77.5°	93.7	88.8	74.8	60.0	48.5	41.9	38.6	38.6	37.8
80°	78.9	77.3	65.0	51.8	41.1	35.4	33.7	32.9	32.1
82.5°	69.1	66.6	56.7	44.4	34.5	29.6	27.1	27.1	27.1
85°	59.2	56.7	47.7	37.8	28.8	24.7	22.2	22.2	22.2
87.5°	51.0	49.3	41.1	32.1	24.7	20.6	18.9	18.9	18.9
90°	44.4	42.8	36.2	28.0	22.2	18.1	17.3	17.3	17.3
92.5°	40.3	37.8	32.1	23.0	18.9	16.4	14.8	14.0	15.6
95°	26.3	23.0	20.6	13.2	11.5	9.0	8.2	7.4	9.0
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)