

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: HALO

Report Number: P1046654

Luminaire Tested: FMNL1112FS5-(black trim)-935

Issue Date: 07/03/2025

Test Information

Test Method: LM-79-2019
Report Number: P1046654
Test Lab: Cooper lighting solutions
Issue Date: 07/03/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: FMNL1112FS5-(black trim)-935
Description: HALO 11 inch 90 CRI COLOR SELECTABLE flush mount Black Trim FIXTURE with night light
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

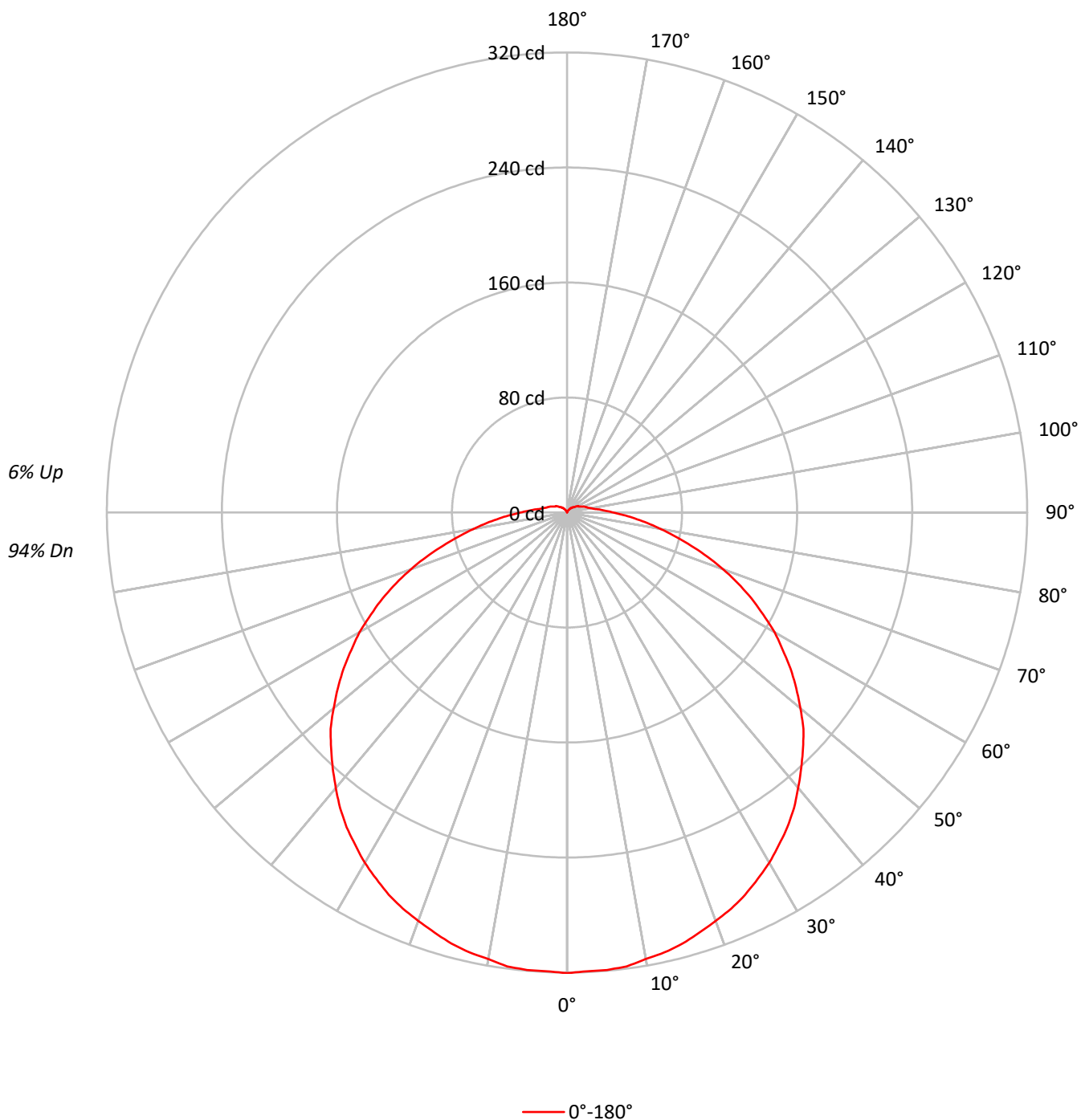
Lumens per Lamp: N/A
Luminaire Lumens: 1119.4 lumens
Efficiency: N/A
Efficacy: 88.8 lumens/watt
Spacing Criteria (0/90/45): 1.3 / 1.3 / 1.43
Luminous Opening: Circular (Dia: 0.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
Input Voltage (V): 120
Input Current (A_{in}): 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: 28.75 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
RCR																				
0	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	94		
1	106	100	96	91	102	98	93	89	92	89	85	87	84	82	83	80	78	76		
2	96	87	79	73	92	84	77	72	80	74	69	75	71	67	72	68	64	62		
3	87	76	67	60	84	73	65	59	70	63	57	66	60	55	63	58	54	51		
4	79	67	57	50	76	65	56	50	62	54	48	58	52	47	56	50	46	43		
5	73	59	50	43	70	58	49	42	55	47	41	52	46	40	50	44	39	37		
6	67	53	44	37	65	52	43	37	49	42	36	47	40	35	45	39	34	32		
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30	28		
8	58	44	35	29	56	43	34	29	41	33	28	39	33	28	38	32	27	25		
9	54	40	32	26	52	39	31	26	38	30	25	36	30	25	35	29	24	23		
10	50	37	29	23	49	36	28	23	35	28	23	33	27	22	32	26	22	20		

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	5421
5°	5425
10°	5419
15°	5437
20°	5443
25°	5476
30°	5496
35°	5519
40°	5524
45°	5551
50°	5578
55°	5599
60°	5641
65°	5669
70°	5714
75°	5844
80°	6460
85°	9163

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 87.5°

Luminance: 15206 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.4	2.7
10°-20°	87.6	7.8
20°-30°	135.2	12.1
30°-40°	167.1	14.9
40°-50°	179.1	16.0
50°-60°	169.6	15.1
60°-70°	139.9	12.5
70°-80°	95.0	8.5
80°-90°	52.3	4.7
90°-100°	25.6	2.3
100°-110°	15.1	1.3
110°-120°	10.1	0.9
120°-130°	6.4	0.6
130°-140°	3.7	0.3
140°-150°	1.8	0.2
150°-160°	0.5	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	253.2	22.6
0°-40°	420.3	37.5
0°-60°	768.9	68.7
0°-90°	1056.2	94.4
90°-120°	50.8	4.5
90°-150°	62.7	5.6
90°-180°	63.0	5.6
0°-180°	1119.4	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	320	
5°	319	30
15°	310	88
25°	293	135
35°	267	167
45°	232	179
55°	190	170
65°	142	140
75°	89	95
85°	47	43
90°	32	18
95°	23	18
105°	14	15
115°	10	10
125°	7	6
135°	5	4
145°	3	2
155°	1	1
165°	0	0
175°	0	0
180°	0	

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CANDELA DISTRIBUTION (FULL):

0°	
0°	320.4
2.5°	319.4
5°	319.4
7.5°	318.4
10°	315.4
12.5°	313.4
15°	310.4
17.5°	306.4
20°	302.3
22.5°	298.3
25°	293.3
27.5°	287.3
30°	281.3
32.5°	274.2
35°	267.2
37.5°	259.2
40°	250.1
42.5°	241.1
45°	232.0
47.5°	223.0
50°	211.9
52.5°	200.9
55°	189.8
57.5°	177.8
60°	166.7
62.5°	153.7
65°	141.6
67.5°	128.6
70°	115.5
72.5°	102.5
75°	89.4
77.5°	77.3
80°	66.3
82.5°	56.3
85°	47.2
87.5°	39.2
90°	32.1
92.5°	27.1
95°	23.1
97.5°	19.1
100°	17.1
102.5°	15.1
105°	14.1
107.5°	13.1
110°	12.1



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CANDELA DISTRIBUTION (continued):

	0°
112.5°	11.0
115°	10.0
117.5°	9.0
120°	9.0
122.5°	8.0
125°	7.0
127.5°	6.0
130°	6.0
132.5°	5.0
135°	5.0
137.5°	4.0
140°	4.0
142.5°	3.0
145°	3.0
147.5°	2.0
150°	2.0
152.5°	1.0
155°	1.0
157.5°	1.0
160°	1.0
162.5°	0.0
165°	0.0
167.5°	0.0
170°	0.0
172.5°	0.0
175°	0.0
177.5°	0.0
180°	0.0

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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room Dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	17.8	19.3	18.2	19.8	20.2	17.8	19.3	18.2	19.8	20.2
	3H	19.9	21.3	20.4	21.8	22.3	19.9	21.3	20.4	21.8	22.3
	4H	20.8	22.2	21.3	22.6	23.1	20.8	22.2	21.3	22.6	23.1
	6H	21.6	22.9	22.1	23.4	23.9	21.6	22.9	22.1	23.4	23.9
	8H	22.1	23.3	22.6	23.8	24.3	22.1	23.3	22.6	23.8	24.3
	12H	22.5	23.6	23.0	24.1	24.7	22.5	23.6	23.0	24.1	24.7
4H	2H	18.5	19.8	19.0	20.3	20.8	18.5	19.8	19.0	20.3	20.8
	3H	20.8	22.0	21.3	22.5	23.0	20.8	22.0	21.3	22.5	23.0
	4H	21.9	23.0	22.4	23.5	24.0	21.9	23.0	22.4	23.5	24.0
	6H	22.9	23.9	23.5	24.4	25.0	22.9	23.9	23.5	24.4	25.0
	8H	23.4	24.3	24.0	24.8	25.4	23.4	24.3	24.0	24.8	25.4
	12H	24.0	24.7	24.5	25.3	25.9	24.0	24.7	24.5	25.3	25.9
8H	4H	22.3	23.2	22.9	23.8	24.4	22.3	23.2	22.9	23.8	24.4
	6H	23.6	24.3	24.1	24.9	25.5	23.6	24.3	24.1	24.9	25.5
	8H	24.2	24.9	24.8	25.5	26.1	24.2	24.9	24.8	25.5	26.1
	12H	24.9	25.5	25.5	26.1	26.8	24.9	25.5	25.5	26.1	26.8
12H	4H	22.4	23.2	23.0	23.8	24.4	22.4	23.2	23.0	23.8	24.4
	6H	23.7	24.4	24.3	25.0	25.6	23.7	24.4	24.3	25.0	25.6
	8H	24.5	25.0	25.0	25.6	26.3	24.5	25.0	25.0	25.6	26.3

(END OF REPORT)