

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: P1046656

Luminaire Tested: FMNL1112FS5-(black trim)-950

Issue Date: 07/03/2025

Test Information

Test Method: LM-79-2019
Report Number: P1046656
Test Lab: Cooper lighting solutions
Issue Date: 07/03/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: FMNL1112FS5-(black trim)-950
Description: HALO 11 inch 90 CRI COLOR SELECTABLE flush mount Black Trim FIXTURE with night light
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

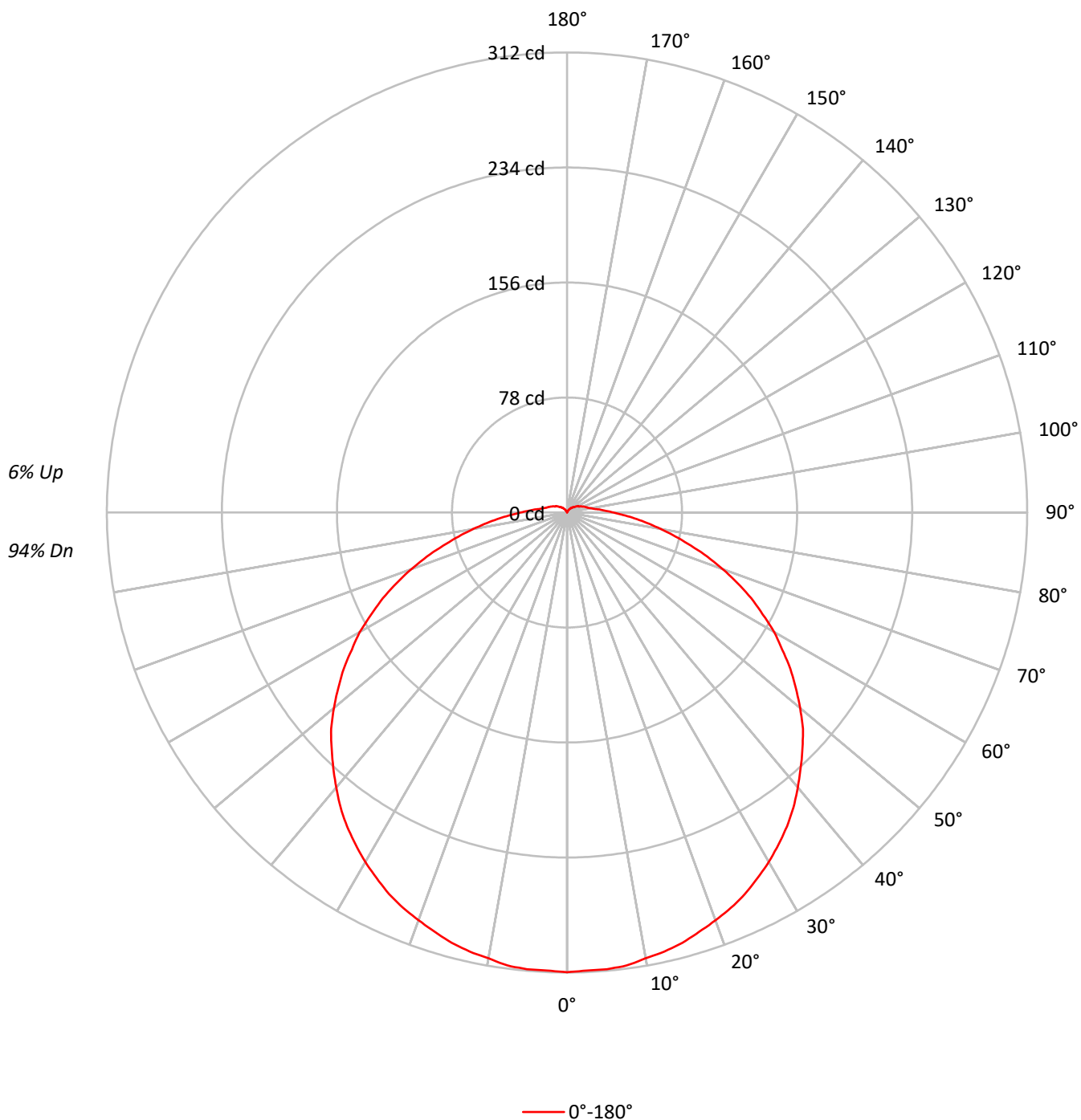
Lumens per Lamp: N/A
Luminaire Lumens: 1089.5 lumens
Efficiency: N/A
Efficacy: 86.5 lumens/watt
Spacing Criteria (0/90/45): 1.3 / 1.3 / 1.43
Luminous Opening: Circular (Dia: 0.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
Input Voltage (V): 120
Input Current (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: 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	22		
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°	5276
5°	5280
10°	5275
15°	5292
20°	5299
25°	5330
30°	5347
35°	5370
40°	5376
45°	5403
50°	5430
55°	5451
60°	5492
65°	5517
70°	5560
75°	5687
80°	6285
85°	8911

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 87.5°

Luminance: 14779 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.6	2.7
10°-20°	85.3	7.8
20°-30°	131.6	12.1
30°-40°	162.6	14.9
40°-50°	174.3	16.0
50°-60°	165.1	15.2
60°-70°	136.1	12.5
70°-80°	92.5	8.5
80°-90°	50.9	4.7
90°-100°	25.0	2.3
100°-110°	14.6	1.3
110°-120°	9.9	0.9
120°-130°	6.3	0.6
130°-140°	3.6	0.3
140°-150°	1.7	0.2
150°-160°	0.5	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	246.4	22.6
0°-40°	409.0	37.5
0°-60°	748.4	68.7
0°-90°	1027.8	94.3
90°-120°	49.5	4.5
90°-150°	61.1	5.6
90°-180°	62.0	5.7
0°-180°	1089.5	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	312	
5°	311	30
15°	302	85
25°	286	132
35°	260	163
45°	226	174
55°	185	165
65°	138	136
75°	87	92
85°	46	41
90°	31	17
95°	22	17
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°	311.8
2.5°	310.9
5°	310.9
7.5°	309.9
10°	307.0
12.5°	305.0
15°	302.1
17.5°	298.2
20°	294.3
22.5°	290.3
25°	285.5
27.5°	279.6
30°	273.7
32.5°	266.9
35°	260.0
37.5°	252.2
40°	243.4
42.5°	234.6
45°	225.8
47.5°	217.0
50°	206.3
52.5°	195.5
55°	184.8
57.5°	173.0
60°	162.3
62.5°	149.6
65°	137.8
67.5°	125.1
70°	112.4
72.5°	99.7
75°	87.0
77.5°	75.3
80°	64.5
82.5°	54.7
85°	45.9
87.5°	38.1
90°	31.3
92.5°	26.4
95°	22.5
97.5°	18.6
100°	16.6
102.5°	14.7
105°	13.7
107.5°	12.7
110°	11.7



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CANDELA DISTRIBUTION (continued):

	0°
112.5°	10.8
115°	9.8
117.5°	8.8
120°	8.8
122.5°	7.8
125°	6.8
127.5°	5.9
130°	5.9
132.5°	4.9
135°	4.9
137.5°	3.9
140°	3.9
142.5°	2.9
145°	2.9
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	17.7	19.2	18.1	19.7	20.1	17.7	19.2	18.1	19.7	20.1
	3H	19.8	21.2	20.3	21.7	22.2	19.8	21.2	20.3	21.7	22.2
	4H	20.7	22.1	21.2	22.5	23.0	20.7	22.1	21.2	22.5	23.0
	6H	21.6	22.8	22.0	23.3	23.8	21.6	22.8	22.0	23.3	23.8
	8H	22.0	23.2	22.5	23.7	24.2	22.0	23.2	22.5	23.7	24.2
	12H	22.4	23.5	22.9	24.0	24.6	22.4	23.5	22.9	24.0	24.6
4H	2H	18.4	19.7	18.9	20.2	20.7	18.4	19.7	18.9	20.2	20.7
	3H	20.7	21.9	21.2	22.4	22.9	20.7	21.9	21.2	22.4	22.9
	4H	21.8	22.9	22.3	23.4	23.9	21.8	22.9	22.3	23.4	23.9
	6H	22.8	23.8	23.4	24.3	24.9	22.8	23.8	23.4	24.3	24.9
	8H	23.3	24.2	23.9	24.7	25.3	23.3	24.2	23.9	24.7	25.3
	12H	23.9	24.7	24.4	25.2	25.8	23.9	24.7	24.4	25.2	25.8
8H	4H	22.3	23.1	22.8	23.7	24.3	22.3	23.1	22.8	23.7	24.3
	6H	23.5	24.2	24.0	24.8	25.4	23.5	24.2	24.0	24.8	25.4
	8H	24.1	24.8	24.7	25.4	26.0	24.1	24.8	24.7	25.4	26.0
	12H	24.8	25.4	25.4	26.0	26.7	24.8	25.4	25.4	26.0	26.7
12H	4H	22.3	23.1	22.9	23.7	24.3	22.3	23.1	22.9	23.7	24.3
	6H	23.6	24.3	24.2	24.9	25.5	23.6	24.3	24.2	24.9	25.5
	8H	24.4	24.9	24.9	25.5	26.2	24.4	24.9	24.9	25.5	26.2

(END OF REPORT)