

LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: HALO

Report Number: P645283

Luminaire Tested: **RLNL6109FSD2W1EWHDM-4000K**

Issue Date: 02/28/2023

Tested By:

Approved By:



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**Test Information**

Test Method: LM-79-08  
 Report Number: P645283  
 Test Lab: ETA Testing Technology  
 Issue Date: 02/28/2023  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: HALO  
 Catalog Number: RLNL6109FSD2W1EWHDM-4000K  
 Description: 6" 90 CRI COLOR TUNING RECESSED DOWNLIGHT DIRECT MOUNT FIXTURE w/  
 NIGHTLIGHT  
 Light Source: 90 CRI 4000K LEDS  
 Ballast/Driver: ELECTRICAL DRIVER

**Summary**

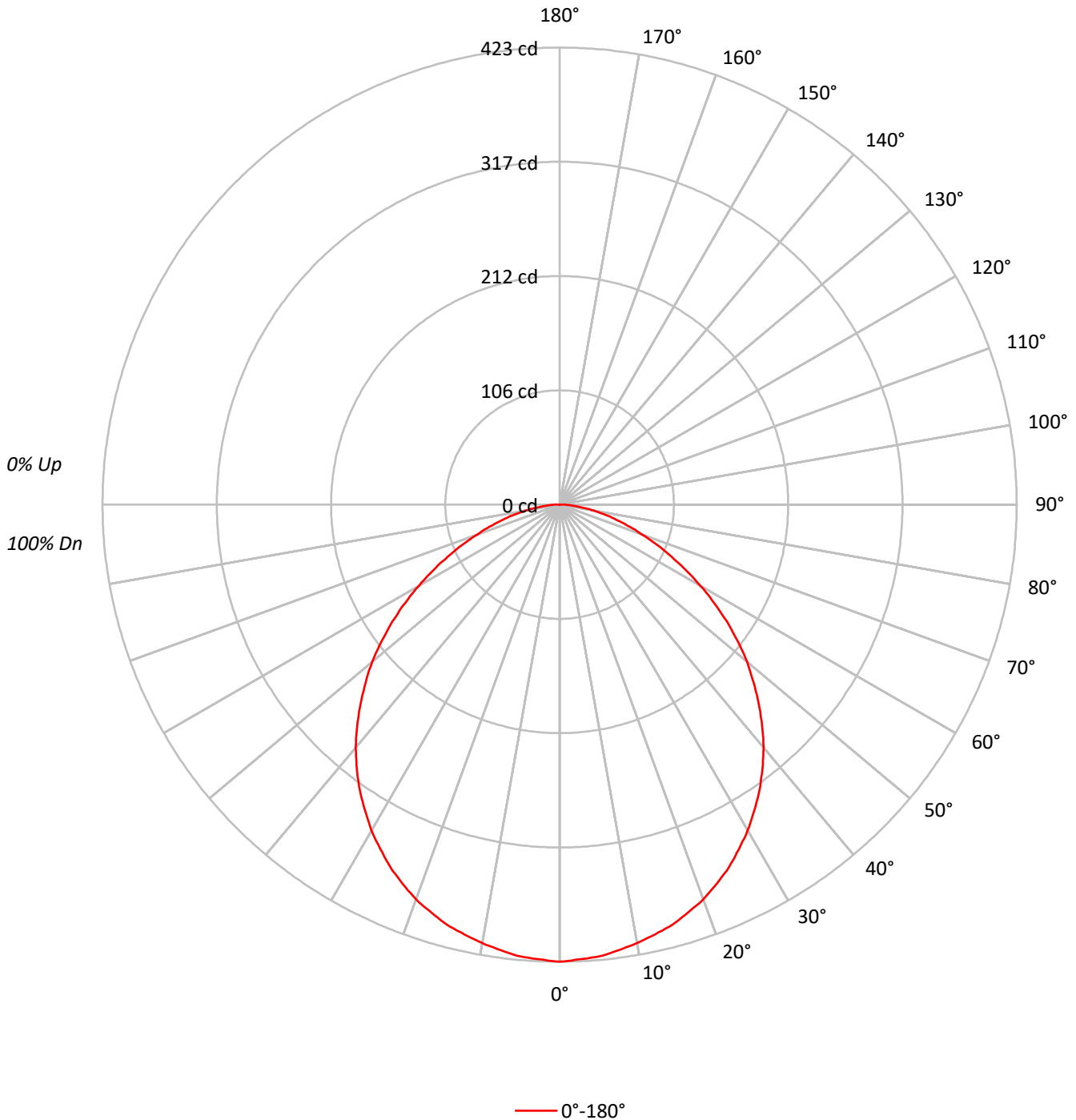
Lumens per Lamp: N/A  
 Luminaire Lumens: 1084.8 lumens  
 Efficiency: N/A  
 Efficacy: 94.3 lumens/watt  
 Spacing Criteria (0/90/45): 1.22 / 1.22 / 1.33  
 Luminous Opening: Circular (Dia: 0.35' x H: 0')  
 CIE Type: Direct

Input Watts (W): 11.5  
 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: 25 FT

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	GONIO 1 IN0055	4/22/2021	10/22/2021
Power Meter	XITRON 2801 IN0197	12/1/2020	12/1/2021
AC Power Source	CHROMA 61505 IN0196	12/1/2020	12/1/2021
DC Power Supply	AGILENT E3634A IN0198	11/30/2020	11/30/2021

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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	109	105	101	97	107	103	99	96	98	95	92	94	92	90	91	89	87	85		
2	100	92	85	80	97	90	84	79	87	82	77	83	79	75	80	77	74	72		
3	91	81	73	67	89	80	72	66	77	70	65	74	69	64	71	67	63	61		
4	84	72	64	57	82	71	63	57	68	62	56	66	60	55	64	59	55	52		
5	77	65	56	50	75	64	55	49	62	54	49	60	53	48	58	52	48	46		
6	71	58	50	43	70	58	49	43	56	48	43	54	48	43	52	47	42	40		
7	66	53	45	39	65	52	44	38	51	43	38	49	43	38	48	42	38	36		
8	62	49	40	34	60	48	40	34	47	39	34	45	39	34	44	38	34	32		
9	58	45	37	31	56	44	36	31	43	36	31	42	35	31	41	35	31	29		
10	54	41	33	28	53	41	33	28	40	33	28	39	32	28	38	32	28	26		

**AVERAGE LUMINANCE (cd/sqm):**

	0°
0°	46206
5°	46032
10°	45732
15°	45540
20°	45195
25°	44666
30°	43917
35°	43016
40°	41890
45°	40252
50°	38483
55°	36003
60°	32887
65°	29550
70°	26100
75°	23049
80°	20135
85°	17175

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.8	3.7
10°-20°	113.5	10.5
20°-30°	170.6	15.7
30°-40°	201.6	18.6
40°-50°	201.0	18.5
50°-60°	168.8	15.6
60°-70°	114.0	10.5
70°-80°	58.8	5.4
80°-90°	16.7	1.5
90°-100°	0.0	0.0
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°	323.9	29.9
0°-40°	525.5	48.4
0°-60°	895.3	82.5
0°-90°	1084.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1084.8	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	423	
5°	420	40
15°	403	114
25°	370	171
35°	322	202
45°	260	201
55°	189	169
65°	114	114
75°	55	59
85°	14	17
90°	2	

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	422.9
5°	419.7
10°	412.2
15°	402.6
20°	388.7
25°	370.5
30°	348.1
35°	322.5
40°	293.7
45°	260.5
50°	226.4
55°	189.0
60°	150.5
65°	114.3
70°	81.7
75°	54.6
80°	32.0
85°	13.7
90°	1.8

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Room Thermometer	ONSET IN0143	12/1/2020	12/1/2021
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(END OF REPORT)