

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: P645290

Luminaire Tested: **RLNL6109FSD2W1EWH-2700K**

Issue Date: 02/28/2023

Tested By:

Approved By:



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**Test Information**

Test Method: LM-79-08  
 Report Number: P645290  
 Test Lab: ETA Testing Technology  
 Issue Date: 02/28/2023  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: HALO  
 Catalog Number: RLNL6109FSD2W1EWH-2700K  
 Description: 6" 90 CRI COLOR TUNING RECESSED DOWNLIGHT RETROFIT DIM TO WARM  
 FIXTURE w/ NIGHTLIGHT  
 Light Source: 90 CRI 2700K LEDS  
 Ballast/Driver: ELECTRICAL DRIVER

**Summary**

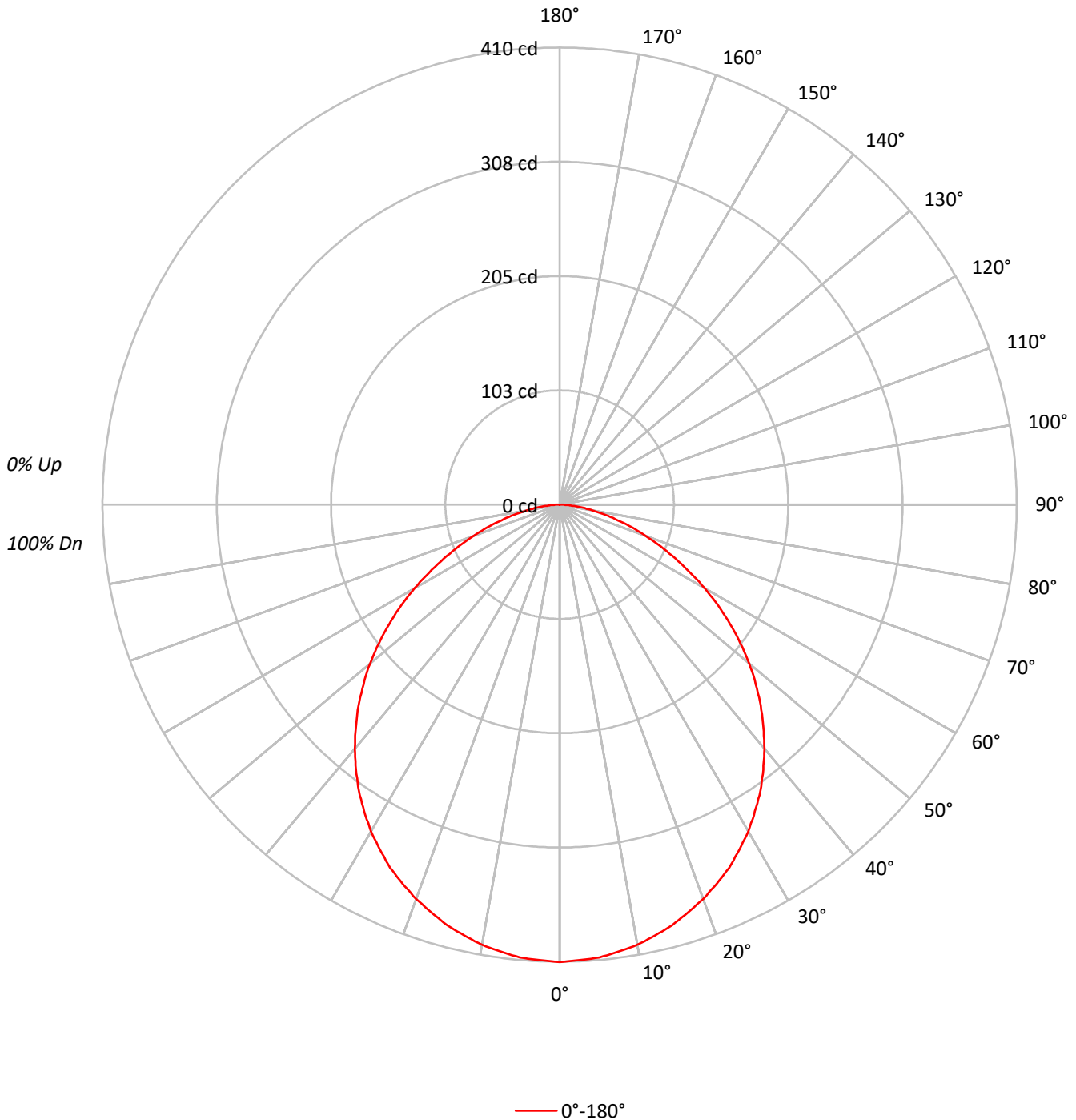
Lumens per Lamp: N/A  
 Luminaire Lumens: 1060.4 lumens  
 Efficiency: N/A  
 Efficacy: 102.0 lumens/watt  
 Spacing Criteria (0/90/45): 1.23 / 1.23 / 1.33  
 Luminous Opening: Circular (Dia: 0.35' x H: 0')  
 CIE Type: Direct

Input Watts (W): 10.4  
 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	0
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	93		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	61	56		66	60	55		64	59	54	52
5	77	65	56	49	75	64	55	49	61	54	49		59	53	48		58	52	48	45
6	71	58	50	43	69	57	49	43	56	48	43		54	47	42		52	47	42	40
7	66	53	44	38	65	52	44	38	51	43	38		49	43	38		48	42	37	35
8	62	48	40	34	60	48	40	34	46	39	34		45	39	34		44	38	34	32
9	58	44	36	31	56	44	36	31	43	36	31		42	35	31		41	35	30	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°	44841
5°	44727
10°	44489
15°	44171
20°	43765
25°	43340
30°	42681
35°	41869
40°	40764
45°	39418
50°	37752
55°	35545
60°	32822
65°	29576
70°	26195
75°	22796
80°	19065
85°	14041

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.7	3.7
10°-20°	110.2	10.4
20°-30°	165.5	15.6
30°-40°	196.1	18.5
40°-50°	196.6	18.5
50°-60°	166.7	15.7
60°-70°	114.1	10.8
70°-80°	58.1	5.5
80°-90°	14.5	1.4
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°	314.4	29.6
0°-40°	510.5	48.1
0°-60°	873.7	82.4
0°-90°	1060.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1060.4	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	410	
5°	408	39
15°	390	110
25°	360	165
35°	314	196
45°	255	197
55°	187	167
65°	114	114
75°	54	58
85°	11	15
90°	1	

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°	410.4
5°	407.8
10°	401.0
15°	390.5
20°	376.4
25°	359.5
30°	338.3
35°	313.9
40°	285.8
45°	255.1
50°	222.1
55°	186.6
60°	150.2
65°	114.4
70°	82.0
75°	54.0
80°	30.3
85°	11.2
90°	0.6

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