

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: P85110

Luminaire Tested: **ELSG405840SN (25deg Beam-0 deg tilt)**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P85110  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P21176)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: ELSG405840SN (25deg Beam-0 deg tilt)  
Description: HALO 4 INCH RECESSED FIXTURE WITH SQUARE TUSCAN BRONZE(SN) TRIM, TUSCAN BRONZE(SN) GIMBAL, NARROW UPPER REFLECTOR AND CLEAR LENS .  
---ABSOLUTE PHOTOMETRY IS BASED ON CALIBRATION FACTORS CREATED USING A 500 WATT, NIST TRACEABLE, OMNI-DIRECTIONAL LAB LUMEN STANDARD IN THE GONIOPHOTOMETER WITH TEST DISTANCE OF 28.75 FEET----  
Light Source: (1) SMT LED 4000K  
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Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: 668 (1 lamp)  
Luminaire Lumens: 667.7 lumens  
Efficiency: 100.0%  
Efficacy: 49.1 lumens/watt  
Spacing Criteria (0/90/45): 0.38 / 0.38 / 0.42  
Luminous Opening: Vertical Cylinder (Dia: 0.33' x H: 0.1')  
CIE Type: Direct

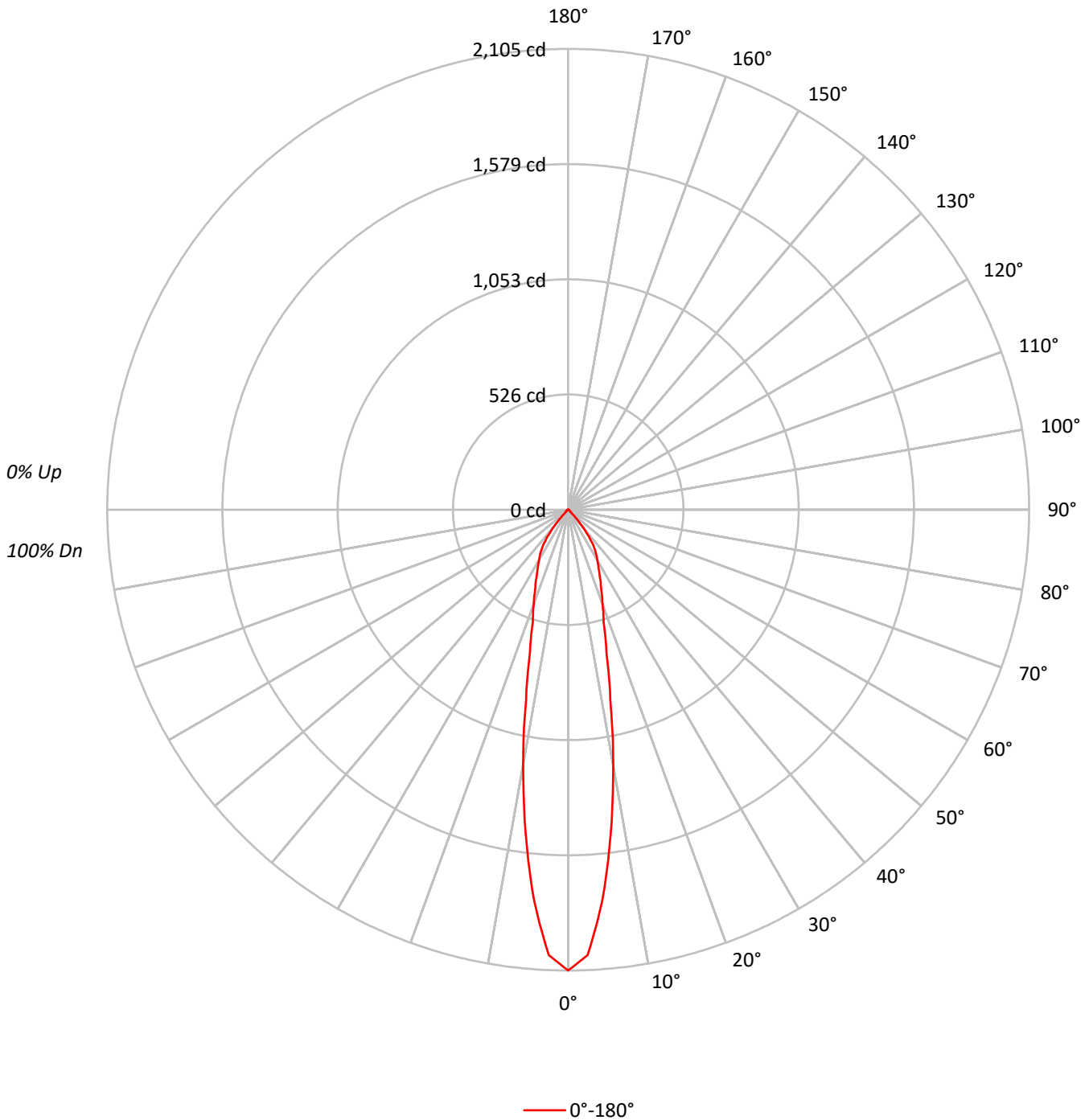
Input Watts (W): 13.6  
Input Voltage (V): NR  
Input Current (Ain): 0.1191  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	114	111	109	107	112	109	107	105	105	104	102		102	100	99		98	97	96	94
2	109	104	101	98	107	103	99	97	100	97	95		97	94	93		94	92	91	89
3	104	98	94	90	102	97	93	90	94	91	88		92	89	87		90	87	85	84
4	100	93	88	84	98	92	87	84	90	86	83		88	84	82		86	83	81	79
5	95	88	83	79	94	87	82	78	85	81	78		84	80	77		82	79	76	75
6	91	83	78	74	90	83	78	74	81	77	73		80	76	73		79	75	73	71
7	88	79	74	70	86	79	74	70	77	73	70		76	72	69		75	72	69	68
8	84	76	70	67	83	75	70	67	74	70	66		73	69	66		72	68	66	65
9	81	72	67	63	80	72	67	63	71	66	63		70	66	63		69	66	63	62
10	78	69	64	61	77	69	64	61	68	64	60		67	63	60		67	63	60	59

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

	0°
0°	259593
5°	214717
10°	139030
15°	78158
20°	52930
25°	39797
30°	31180
35°	24010
40°	12523
45°	2928
50°	1754
55°	1071
60°	327
65°	353
70°	387
75°	216
80°	247
85°	290



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	151.4	22.7	22.7
10°-20°	197.0	29.5	29.5
20°-30°	159.7	23.9	23.9
30°-40°	120.2	18.0	18.0
40°-50°	28.7	4.3	4.3
50°-60°	6.8	1.0	1.0
60°-70°	1.9	0.3	0.3
70°-80°	1.3	0.2	0.2
80°-90°	0.7	0.1	0.1
90°-100°	0.0	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-30°	508.1	76.1	76.1
0°-40°	628.2	94.1	94.0
0°-60°	663.7	99.4	99.4
0°-90°	667.7	100.0	100.0
90°-120°	0.0	0.0	0.0
90°-150°	0.0	0.0	0.0
90°-180°	0.0	0.0	0.0
0°-180°	667.7	100.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2105	
5°	1792	151
15°	675	197
25°	344	160
35°	202	120
45°	23	29
55°	8	7
65°	2	2
75°	1	1
85°	1	1
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2104.6
2.5°	2036.1
5°	1792.1
7.5°	1488.5
10°	1184.8
12.5°	890.0
15°	674.7
17.5°	538.8
20°	459.3
22.5°	394.2
25°	344.5
27.5°	300.3
30°	267.2
32.5°	236.3
35°	202.1
37.5°	154.6
40°	102.7
42.5°	56.3
45°	23.2
47.5°	15.5
50°	13.3
52.5°	11.0
55°	7.7
57.5°	4.4
60°	2.2
62.5°	2.2
65°	2.2
67.5°	1.1
70°	2.2
72.5°	1.1
75°	1.1
77.5°	1.1
80°	1.1
82.5°	1.1
85°	1.1
87.5°	0.0
90°	0.0

(END OF REPORT)