

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: P85077

Luminaire Tested: **ELSG405835TBZ (25deg Beam-0 deg tilt)**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P85077  
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: ELSG405835TBZ (25deg Beam-0 deg tilt)  
Description: HALO 4 INCH RECESSED FIXTURE WITH SQUARE TUSCAN BRONZE TRIM,  
TUSCAN BRONZE 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 3500K  
(1) SMT LED 3500K  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: 637 (1 lamp)  
Luminaire Lumens: 637.5 lumens  
Efficiency: 100.1%  
Efficacy: 46.9 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

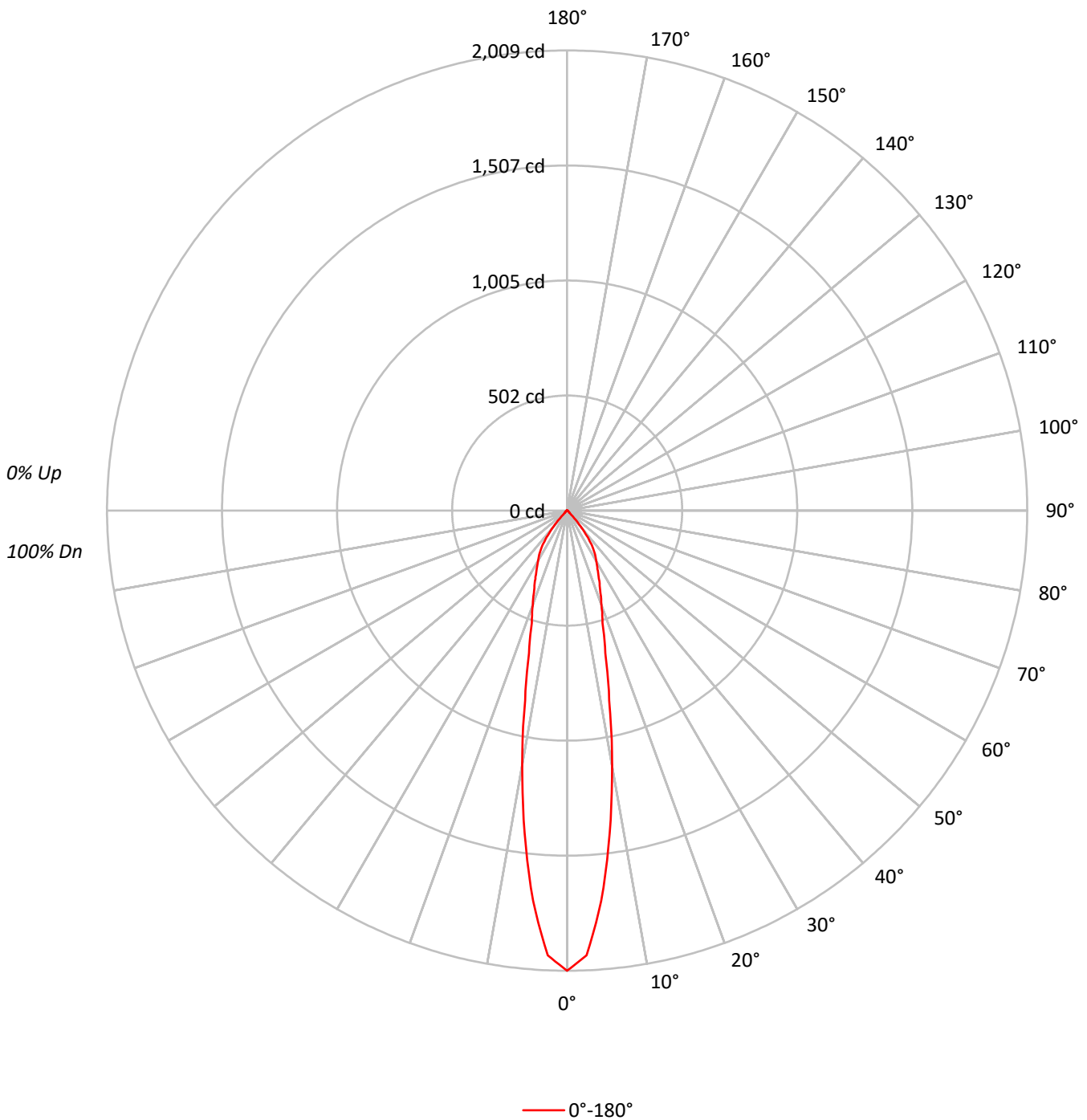
Input Watts (W): 13.6  
Input Voltage (V): NR  
Input Current (Ain): 0.1191  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P85077

CATALOG NUMBER: ELSG405835TBZ (25deg Beam-0 deg tilt)

### Luminous Intensity Polar Plot





TEST NUMBER: P85077

CATALOG NUMBER: ELSG405835TBZ (25deg Beam-0 deg tilt)

**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	112	109	107	112	109	107	105	105	104	102		102	100	99		98	97	96	95
2	109	105	101	98	107	103	100	97	100	97	95		97	95	93		94	92	91	89
3	104	98	94	90	102	97	93	90	95	91	88		92	89	87		90	88	86	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	79	85	81	78		84	80	77		82	79	76	75
6	91	83	78	74	90	83	78	74	81	77	74		80	76	73		79	75	73	71
7	88	79	74	70	86	79	74	70	78	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	69	66	65
9	81	72	67	64	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°	247789
5°	204964
10°	132705
15°	74601
20°	50533
25°	37983
30°	29768
35°	22917
40°	11950
45°	2790
50°	1661
55°	1030
60°	312
65°	337
70°	370
75°	216
80°	247
85°	290



TEST NUMBER: P85077

CATALOG NUMBER: ELSG405835TBZ (25deg Beam-0 deg tilt)

**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	144.5	22.7	22.7
10°-20°	188.0	29.5	29.5
20°-30°	152.4	23.9	23.9
30°-40°	114.7	18.0	18.0
40°-50°	27.4	4.3	4.3
50°-60°	6.5	1.0	1.0
60°-70°	1.8	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°	485.0	76.1	76.1
0°-40°	599.7	94.1	94.1
0°-60°	633.6	99.4	99.5
0°-90°	637.5	100.0	100.1
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°	637.5	100.0	100.1

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2009	
5°	1711	145
15°	644	188
25°	329	152
35°	193	115
45°	22	27
55°	7	7
65°	2	2
75°	1	1
85°	1	1
90°	0	



TEST NUMBER: P85077

CATALOG NUMBER: ELSG405835TBZ (25deg Beam-0 deg tilt)

**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2008.9
2.5°	1943.6
5°	1710.7
7.5°	1420.8
10°	1130.9
12.5°	849.5
15°	644.0
17.5°	514.4
20°	438.5
22.5°	376.3
25°	328.8
27.5°	286.7
30°	255.1
32.5°	225.6
35°	192.9
37.5°	147.6
40°	98.0
42.5°	53.8
45°	22.1
47.5°	14.8
50°	12.6
52.5°	10.5
55°	7.4
57.5°	4.2
60°	2.1
62.5°	2.1
65°	2.1
67.5°	1.1
70°	2.1
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)