

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: P21162

Luminaire Tested: **ELG405830TBZ(25deg Beam-0deg tilt)**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P21162  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: ELG405830TBZ(25deg Beam-0deg tilt)  
Description: HALO 4 INCH RECESSED FIXTURE WITH ROUND 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 3000K  
(1) 14 WATTS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: 634 (1 lamp)  
Luminaire Lumens: 637.4 lumens  
Efficiency: 100.5%  
Efficacy: 46.5 lumens/watt  
Spacing Criteria (0/90/45): 0.37 / 0.37 / 0.41  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

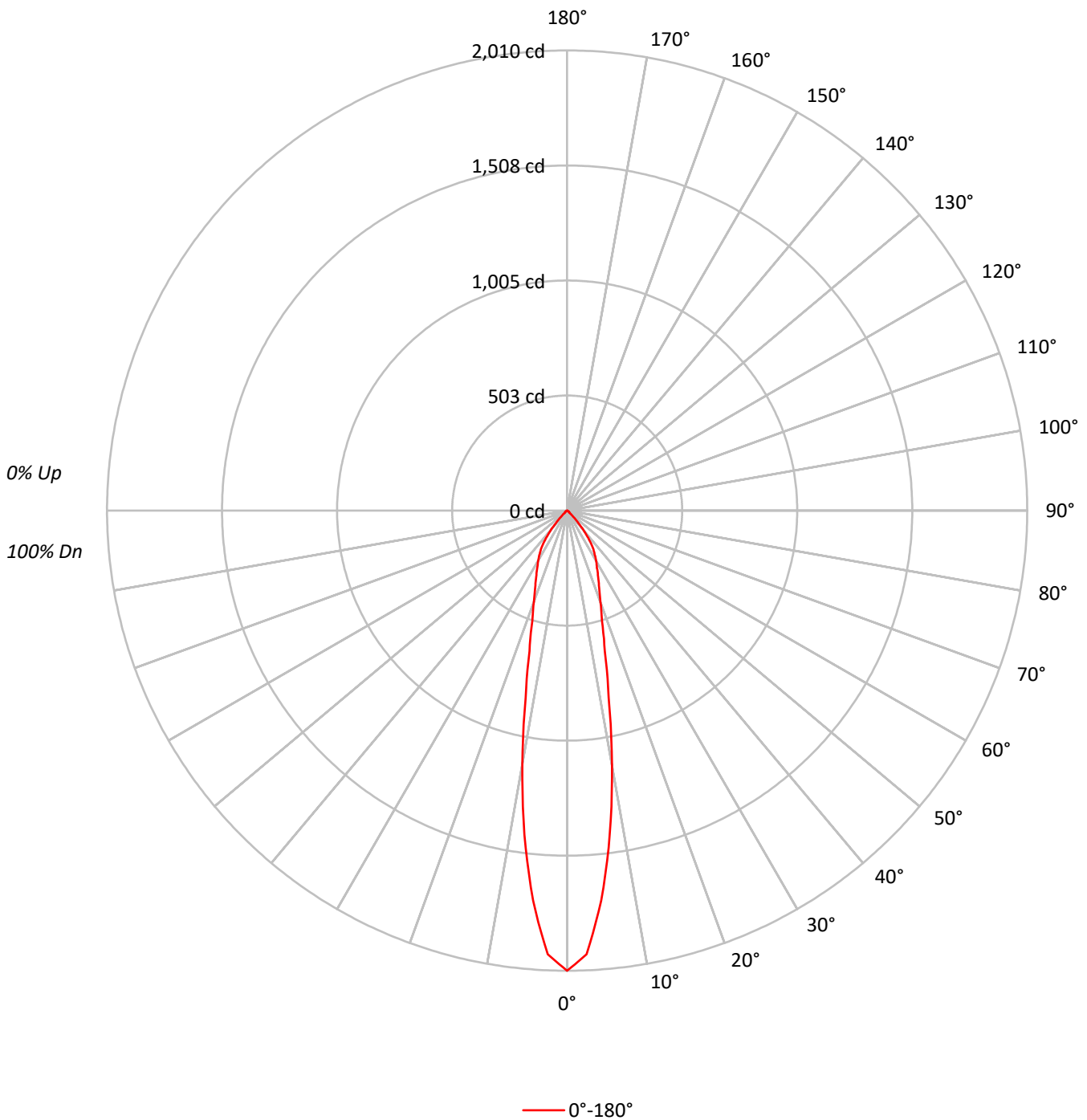
Input Watts (W): 13.7  
Input Voltage (V): NR  
Input Current (Ain): 0.11966  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	120	120	120	120	117	117	117	117	112	112	112		107	107	107		103	103	103	101
1	115	112	110	108	112	110	108	106	106	104	103		102	101	100		99	98	97	95
2	110	105	101	98	107	103	100	97	100	97	95		97	95	93		94	93	91	89
3	105	99	94	91	103	97	93	90	95	91	88		92	90	87		90	88	86	84
4	100	93	88	84	98	92	87	84	90	86	83		88	85	82		86	83	81	80
5	96	88	83	79	94	87	82	79	85	81	78		84	80	77		82	79	77	75
6	92	84	78	74	90	83	78	74	81	77	74		80	76	73		79	75	73	71
7	88	79	74	70	87	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	64
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°	247925
5°	211727
10°	141155
15°	81087
20°	55786
25°	43551
30°	35892
35°	29061
40°	17551
45°	5408
50°	2495
55°	1720
60°	740
65°	584
70°	361
75°	477
80°	710
85°	1415



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	144.6	22.7	22.8
10°-20°	185.2	29.1	29.2
20°-30°	148.7	23.3	23.4
30°-40°	115.8	18.2	18.3
40°-50°	32.8	5.2	5.2
50°-60°	6.6	1.0	1.0
60°-70°	2.0	0.3	0.3
70°-80°	1.1	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°	478.4	75.1	75.5
0°-40°	594.2	93.2	93.7
0°-60°	633.7	99.4	100.0
0°-90°	637.4	100.0	100.5
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°	637.4	100.0	100.5

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2010	
5°	1710	145
15°	635	185
25°	320	149
35°	193	116
45°	31	33
55°	8	7
65°	2	2
75°	1	1
85°	1	1
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2010
2.5°	1940
5°	1710
7.5°	1427
10°	1127
12.5°	837
15°	635
17.5°	505
20°	425
22.5°	364
25°	320
27.5°	282
30°	252
32.5°	223
35°	193
37.5°	152
40°	109
42.5°	67
45°	31
47.5°	16
50°	13
52.5°	10
55°	8
57.5°	4
60°	3
62.5°	2
65°	2
67.5°	2
70°	1
72.5°	1
75°	1
77.5°	1
80°	1
82.5°	1
85°	1
87.5°	0
90°	0

(END OF REPORT)