

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: P21163

Luminaire Tested: **ELG405830TBZ(35deg Beam-0deg tilt)**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P21163  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: ELG405830TBZ(35deg Beam-0deg tilt)  
Description: HALO 4 INCH RECESSED FIXTURE WITH ROUND TUSCAN BRONZE TRIM,  
TUSCAN BRONZE GIMBAL, MEDIUM 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: 606 (1 lamp)  
Luminaire Lumens: 608.0 lumens  
Efficiency: 100.3%  
Efficacy: 44.7 lumens/watt  
Spacing Criteria (0/90/45): 0.54 / 0.54 / 0.55  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

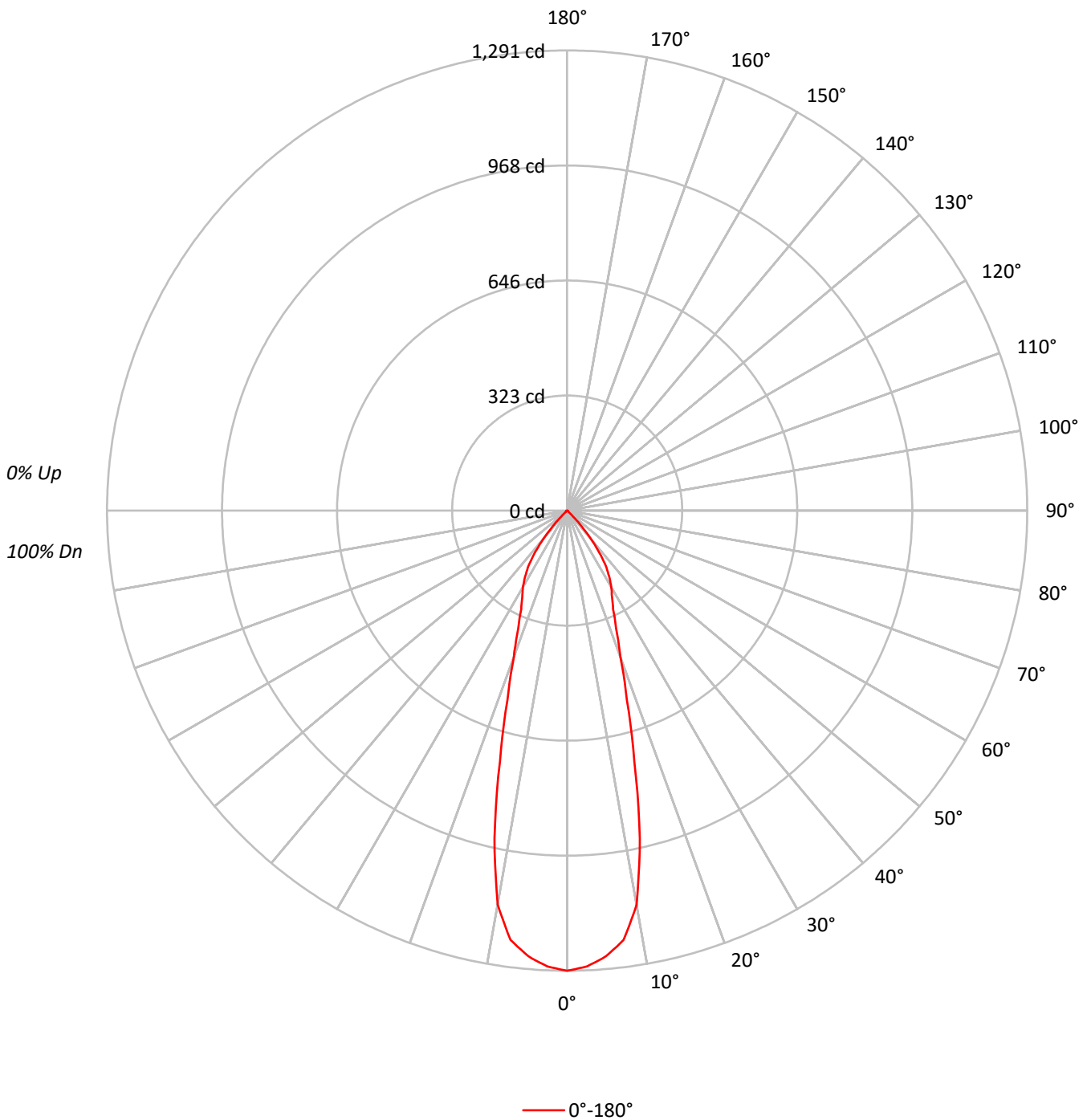
Input Watts (W): 13.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 0.11948  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	117	117	117	117	111	111	111	107	107	107	102	102	102	100
1	114	112	110	107	112	110	108	106	106	104	103	102	101	99	99	98	97	95
2	109	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	89	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	91	83	78	74	90	83	78	74	81	77	73	80	76	73	79	75	72	71
7	88	79	74	70	86	79	73	70	77	73	69	76	72	69	75	72	69	67
8	84	75	70	66	83	75	70	66	74	69	66	73	69	66	72	68	65	64
9	81	72	67	63	80	71	66	63	71	66	63	70	66	63	69	65	62	61
10	78	69	64	60	77	68	63	60	68	63	60	67	63	60	66	62	60	58

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

	0°
0°	159239
5°	155390
10°	140529
15°	93091
20°	57493
25°	41510
30°	35322
35°	28459
40°	16746
45°	4012
50°	768
55°	645
60°	247
65°	292
70°	361
75°	0
80°	0
85°	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	116.0	19.1	19.1
10°-20°	202.9	33.4	33.5
20°-30°	145.4	23.9	24.0
30°-40°	113.2	18.6	18.7
40°-50°	26.8	4.4	4.4
50°-60°	2.3	0.4	0.4
60°-70°	1.0	0.2	0.2
70°-80°	0.4	0.1	0.1
80°-90°	0.0	0.0	0.0
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°	464.3	76.4	76.6
0°-40°	577.5	95.0	95.3
0°-60°	606.6	99.8	100.1
0°-90°	608.0	100.0	100.3
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°	608.0	100.0	100.3

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	1291	
5°	1255	116
15°	729	203
25°	305	145
35°	189	113
45°	23	27
55°	3	2
65°	1	1
75°	0	0
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	1291
2.5°	1280
5°	1255
7.5°	1215
10°	1122
12.5°	942
15°	729
17.5°	558
20°	438
22.5°	358
25°	305
27.5°	272
30°	248
32.5°	219
35°	189
37.5°	148
40°	104
42.5°	60
45°	23
47.5°	7
50°	4
52.5°	3
55°	3
57.5°	2
60°	1
62.5°	1
65°	1
67.5°	1
70°	1
72.5°	1
75°	0
77.5°	0
80°	0
82.5°	0
85°	0
87.5°	0
90°	0

(END OF REPORT)