

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: P85059

Luminaire Tested: **ELG405840TBZ(25 deg Beam-0deg tilt)**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P85059  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P21162)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: ELG405840TBZ(25 deg 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 4000K  
(1) 14 WATTS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: 704 (1 lamp)  
Luminaire Lumens: 703.8 lumens  
Efficiency: 100.0%  
Efficacy: 51.4 lumens/watt  
Spacing Criteria (0/90/45): 0.37 / 0.37 / 0.41  
Luminous Opening: Vertical Cylinder (Dia: 0.33' x H: 0.1')  
CIE Type: Direct

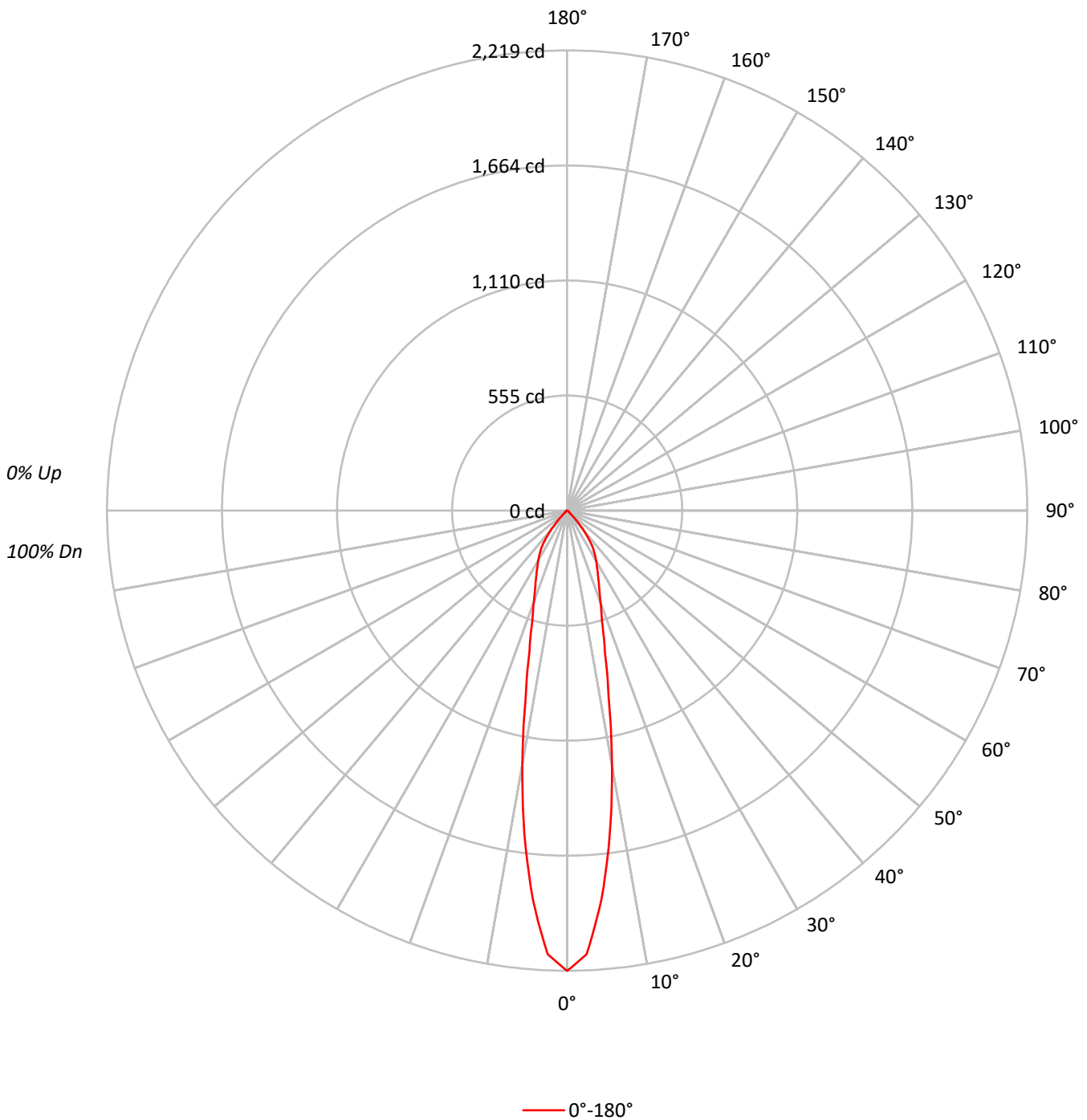
Input Watts (W): 13.7  
Input Voltage (V): NR  
Input Current (Ain): 0.11966  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°
0°	273753
5°	226231
10°	146024
15°	81227
20°	54082
25°	40813
30°	32476
35°	25317
40°	14681
45°	4317
50°	1899
55°	1224
60°	490
65°	353
70°	194
75°	216
80°	247
85°	290



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	159.7	22.7	22.7
10°-20°	204.5	29.1	29.0
20°-30°	164.1	23.3	23.3
30°-40°	127.9	18.2	18.2
40°-50°	36.3	5.2	5.2
50°-60°	7.3	1.0	1.0
60°-70°	2.2	0.3	0.3
70°-80°	1.2	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°	528.3	75.1	75.0
0°-40°	656.1	93.2	93.2
0°-60°	699.7	99.4	99.4
0°-90°	703.8	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°	703.8	100.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2219	
5°	1888	160
15°	701	204
25°	353	164
35°	213	128
45°	34	36
55°	9	7
65°	2	2
75°	1	1
85°	1	1
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2219.4
2.5°	2142.1
5°	1888.2
7.5°	1575.7
10°	1244.4
12.5°	924.2
15°	701.2
17.5°	557.6
20°	469.3
22.5°	401.9
25°	353.3
27.5°	311.4
30°	278.3
32.5°	246.2
35°	213.1
37.5°	167.8
40°	120.4
42.5°	74.0
45°	34.2
47.5°	17.7
50°	14.4
52.5°	11.0
55°	8.8
57.5°	4.4
60°	3.3
62.5°	2.2
65°	2.2
67.5°	2.2
70°	1.1
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)