

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: P85117

Luminaire Tested: **EL405827-TLS408WHBB**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P85117  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: EL405827-TLS408WHBB  
Description: \*\*\*THIS IS A REVISION OF P21159 TO UPDATE CATALOG NUMBER\*\*\*HALO 4 INCH RECESSED FIXTURE WITH 4 INCH TUSCAN BRONZE(WH) SQUARE TRIM, BLACK SQUARE BAFFLE, SOLITE LENS AND UPPER TRIM REFLECTOR. ---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 2700K  
(1) 221 14 WATTS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: 503 (1 lamp)  
Luminaire Lumens: 502.9 lumens  
Efficiency: 100.0%  
Efficacy: 36.7 lumens/watt  
Spacing Criteria (0/90/45): 0.6 / 0.6 / 0.66  
Luminous Opening: Vertical Cylinder (Dia: 0.33' x H: 0.1')  
CIE Type: Direct

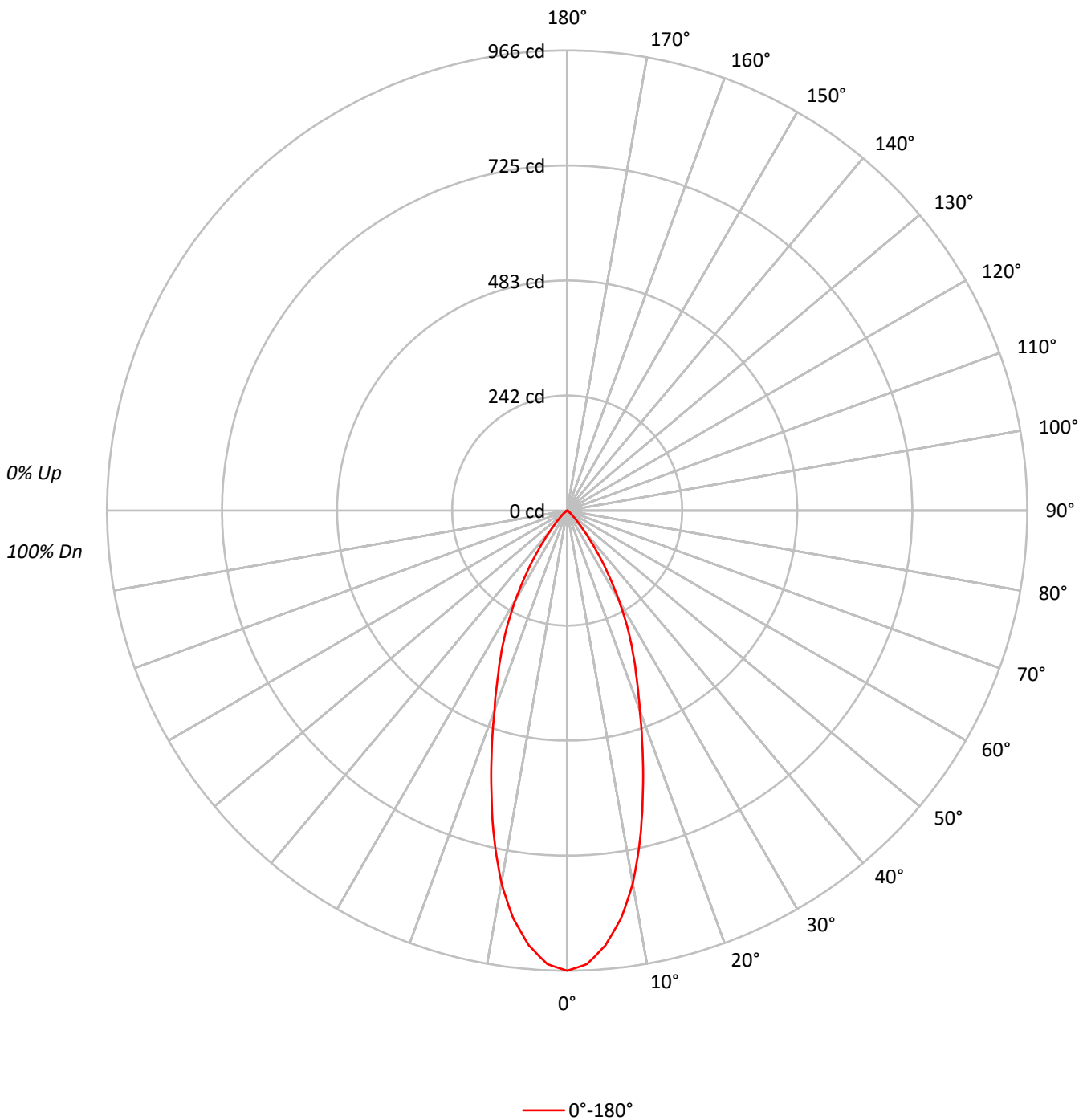
Input Watts (W): 13.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 0.12010  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	95
2	109	105	101	98	107	103	99	97	100	97	95		97	94	93		94	92	91	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	77	74	90	82	77	73	81	76	73		79	75	72		78	75	72	71
7	87	79	73	69	86	78	73	69	77	72	69		76	72	69		75	71	68	67
8	83	75	69	66	82	74	69	66	73	69	65		72	68	65		71	68	65	64
9	80	71	66	62	79	71	66	62	70	65	62		69	65	62		68	64	62	60
10	77	68	63	59	76	68	63	59	67	62	59		66	62	59		65	62	59	58

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

	0°
0°	119152
5°	109808
10°	93172
15°	71172
20°	51409
25°	37590
30°	25322
35°	14328
40°	6609
45°	2714
50°	1108
55°	515
60°	282
65°	144
70°	0
75°	0
80°	0
85°	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	83.6	16.6	16.6
10°-20°	169.7	33.7	33.7
20°-30°	148.4	29.5	29.5
30°-40°	77.3	15.4	15.4
40°-50°	19.2	3.8	3.8
50°-60°	3.8	0.8	0.8
60°-70°	0.9	0.2	0.2
70°-80°	0.0	0.0	0.0
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°	401.8	79.9	79.9
0°-40°	479.0	95.3	95.2
0°-60°	502.0	99.8	99.8
0°-90°	502.9	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°	502.9	100.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	966	
5°	916	84
15°	614	170
25°	325	148
35°	121	77
45°	22	19
55°	4	4
65°	1	1
75°	0	0
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	966.0
2.5°	953.0
5°	916.5
7.5°	864.1
10°	794.0
12.5°	707.0
15°	614.4
17.5°	525.6
20°	446.1
22.5°	380.6
25°	325.4
27.5°	271.2
30°	217.0
32.5°	166.5
35°	120.6
37.5°	82.3
40°	54.2
42.5°	34.6
45°	21.5
47.5°	14.0
50°	8.4
52.5°	5.6
55°	3.7
57.5°	2.8
60°	1.9
62.5°	0.9
65°	0.9
67.5°	0.9
70°	0.0
72.5°	0.0
75°	0.0
77.5°	0.0
80°	0.0
82.5°	0.0
85°	0.0
87.5°	0.0
90°	0.0

(END OF REPORT)