

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: P21157-R2

Luminaire Tested: **EL405830-TLS408WHWB**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P21157-R2  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: EL405830-TLS408WHWB  
Description: \*\*\*THIS IS A REVISION OF P21157 TO UPDATE CATALOG NUMBER\*\*\*HALO 4 INCH RECESSED FIXTURE WITH 4 INCH WHITE SQUARE TRIM,WHITE 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 3000K  
(1) 14 WATTS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: 567 (1 lamp)  
Luminaire Lumens: 568.4 lumens  
Efficiency: 100.2%  
Efficacy: 41.5 lumens/watt  
Spacing Criteria (0/90/45): 0.61 / 0.61 / 0.67  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

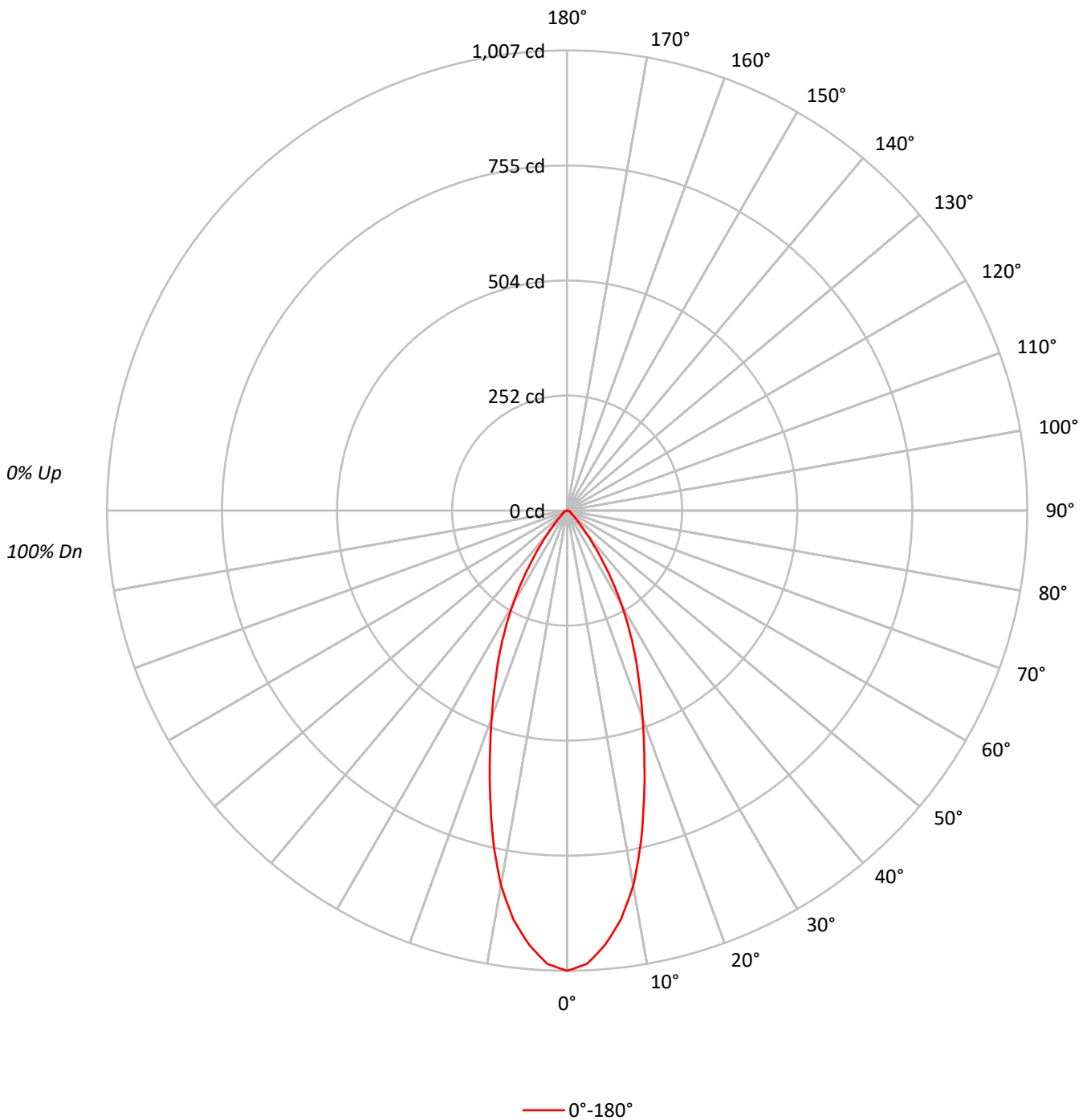
Input Watts (W): 13.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 0.12016  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	111	109	106	111	109	107	105	105	103	101		101	100	98		98	97	96	94
2	108	103	99	96	106	102	98	95	99	96	93		96	93	91		93	91	89	87
3	103	97	92	88	101	95	91	87	93	89	86		90	87	85		88	86	83	82
4	98	91	85	81	96	90	85	81	88	83	80		86	82	79		84	81	78	77
5	94	86	80	76	92	85	79	75	83	78	75		81	77	74		80	76	73	72
6	89	81	75	71	88	80	75	71	78	74	70		77	73	70		76	72	69	68
7	85	76	71	67	84	76	70	66	75	70	66		73	69	66		72	68	65	64
8	82	72	67	63	80	72	67	63	71	66	62		70	65	62		69	65	62	61
9	78	69	63	60	77	68	63	59	68	63	59		67	62	59		66	62	59	58
10	75	66	60	56	74	65	60	56	64	60	56		64	59	56		63	59	56	55

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

	0°
0°	124209
5°	118121
10°	104332
15°	83003
20°	63268
25°	48042
30°	33898
35°	20479
40°	10949
45°	5931
50°	3454
55°	2581
60°	2220
65°	2043
70°	2164
75°	1906
80°	1421
85°	1415



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	87.3	15.4	15.4
10°-20°	180.0	31.7	31.8
20°-30°	161.0	28.3	28.4
30°-40°	87.6	15.4	15.4
40°-50°	28.3	5.0	5.0
50°-60°	11.5	2.0	2.0
60°-70°	7.3	1.3	1.3
70°-80°	4.2	0.7	0.7
80°-90°	1.1	0.2	0.2
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°	428.4	75.4	75.6
0°-40°	516.0	90.8	91.0
0°-60°	555.8	97.8	98.0
0°-90°	568.4	100.0	100.2
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°	568.4	100.0	100.2

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	1007	
5°	954	87
15°	650	180
25°	353	161
35°	136	88
45°	34	28
55°	12	11
65°	7	7
75°	4	4
85°	1	1
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	1007
2.5°	993
5°	954
7.5°	902
10°	833
12.5°	745
15°	650
17.5°	561
20°	482
22.5°	413
25°	353
27.5°	294
30°	238
32.5°	185
35°	136
37.5°	97
40°	68
42.5°	48
45°	34
47.5°	24
50°	18
52.5°	15
55°	12
57.5°	11
60°	9
62.5°	8
65°	7
67.5°	7
70°	6
72.5°	5
75°	4
77.5°	3
80°	2
82.5°	2
85°	1
87.5°	0
90°	0

(END OF REPORT)