

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: P21159-R2

Luminaire Tested: **EL405830-TLS408TBZBB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P21159-R2
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: EL405830-TLS408TBZBB
Description: ***THIS IS A REVISION OF P21159 TO UPDATE CATALOG NUMBER***HALO 4 INCH RECESSED FIXTURE WITH 4 INCH TUSCAN BRONZE 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 3000K
(1) 14 WATTS
Ballast/Driver: ELECTRONIC DRIVER

Summary

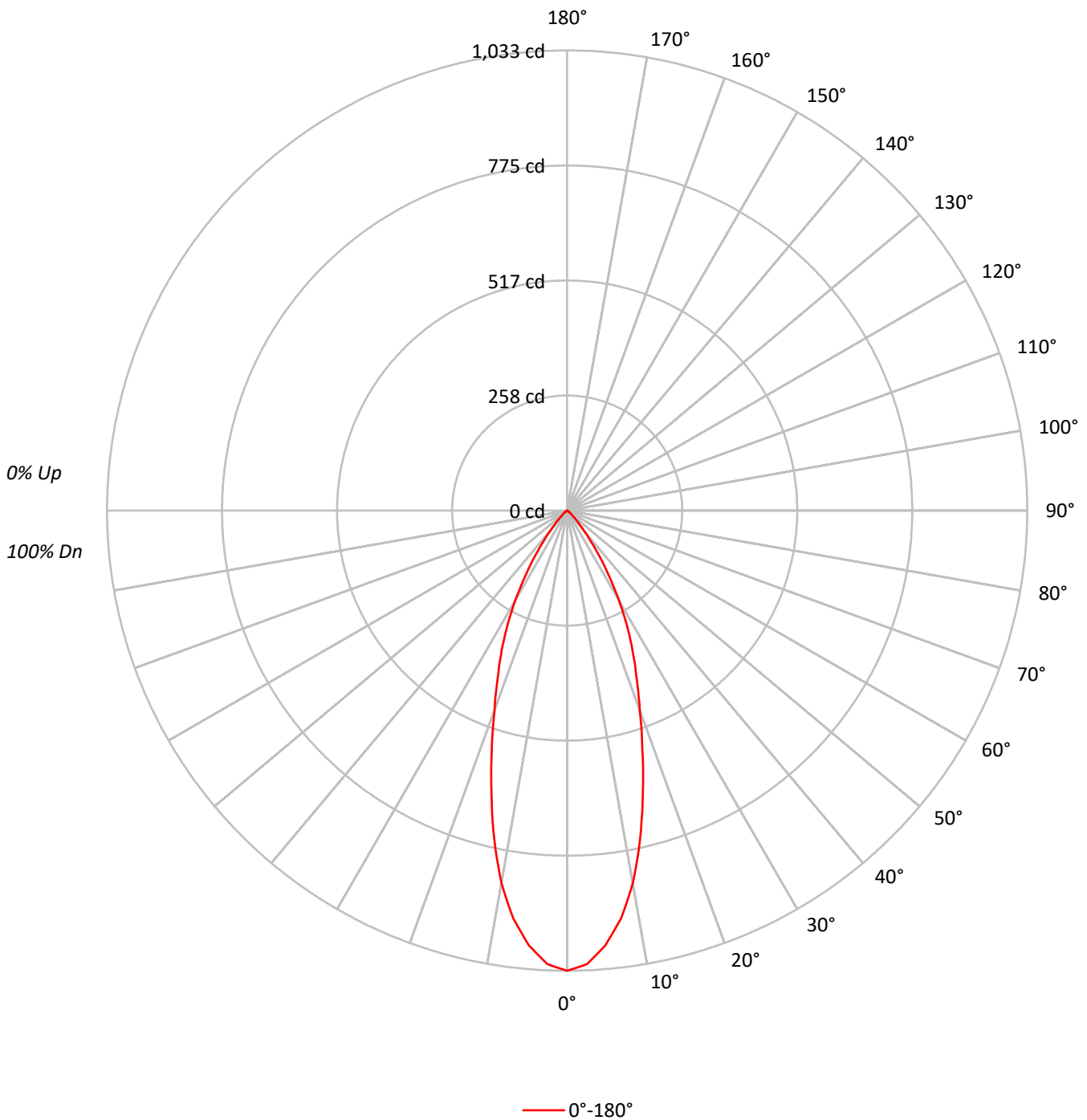
Lumens per Lamp: 537 (1 lamp)
Luminaire Lumens: 537.8 lumens
Efficiency: 100.2%
Efficacy: 39.3 lumens/watt
Spacing Criteria (0/90/45): 0.6 / 0.6 / 0.66
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 13.7
Input Voltage (V): NR
Input Current (A_{in}): 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



TEST NUMBER: P21159-R2
CATALOG NUMBER: EL405830-TLS408TBZBB

Luminous Intensity Polar Plot





TEST NUMBER: P21159-R2

CATALOG NUMBER: EL405830-TLS408TBZBB

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		107	107	107		102	102	102	100
1	114	112	109	107	112	109	107	106	105	104	102		102	100	99		98	97	96	95
2	109	105	101	98	107	103	100	97	100	97	95		97	95	93		94	92	91	89
3	104	98	94	90	102	97	93	90	94	91	88		92	89	87		90	88	85	84
4	100	93	88	84	98	92	87	83	90	86	82		88	84	82		86	83	81	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	73	81	76	73		79	76	73		78	75	72	71
7	87	79	73	70	86	78	73	69	77	72	69		76	72	69		75	71	68	67
8	84	75	70	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	65	62	61
10	77	68	63	59	76	68	63	59	67	62	59		66	62	59		66	62	59	58

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	127416
5°	121340
10°	106336
15°	83897
20°	62612
25°	47362
30°	33043
35°	19424
40°	9339
45°	4012
50°	1727
55°	860
60°	493
65°	292
70°	0
75°	0
80°	0
85°	0



TEST NUMBER: P21159-R2

CATALOG NUMBER: EL405830-TLS408TBZBB

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	89.4	16.6	16.7
10°-20°	181.5	33.7	33.8
20°-30°	158.7	29.5	29.6
30°-40°	82.6	15.4	15.4
40°-50°	20.5	3.8	3.8
50°-60°	4.1	0.8	0.8
60°-70°	1.0	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°	429.6	79.9	80.0
0°-40°	512.3	95.2	95.4
0°-60°	536.9	99.8	100.0
0°-90°	537.8	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°	537.8	100.0	100.2

CANDELA DISTRIBUTION:

	0°	Flux
0°	1033	
5°	980	89
15°	657	181
25°	348	159
35°	129	83
45°	23	21
55°	4	4
65°	1	1
75°	0	0
85°	0	0
90°	0	



TEST NUMBER: P21159-R2

CATALOG NUMBER: EL405830-TLS408TBZBB

CANDELA DISTRIBUTION (FULL):

	0°
0°	1033
2.5°	1019
5°	980
7.5°	924
10°	849
12.5°	756
15°	657
17.5°	562
20°	477
22.5°	407
25°	348
27.5°	290
30°	232
32.5°	178
35°	129
37.5°	88
40°	58
42.5°	37
45°	23
47.5°	15
50°	9
52.5°	6
55°	4
57.5°	3
60°	2
62.5°	1
65°	1
67.5°	1
70°	0
72.5°	0
75°	0
77.5°	0
80°	0
82.5°	0
85°	0
87.5°	0
90°	0

(END OF REPORT)