

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: P20350

Luminaire Tested: **EL405830-TL402TBZS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P20350  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: EL405830-TL402TBZS  
Description: HALO 4 INCH RECESSED LED DOWNLIGHT WITH TUSCAN BRONZE FINISH  
REFLECTOR AND PRISMATIC LENS IN TRIM EL405830-TL402TBZS  
Light Source: (1)SURFACE MOUNT LED  
14 WATTS  
Ballast/Driver: 120 VOLT ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: 555 (1 lamp)  
Luminaire Lumens: 556.3 lumens  
Efficiency: 100.2%  
Efficacy: 39.7 lumens/watt  
Spacing Criteria (0/90/45): 0.55 / 0.55 / 0.74  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

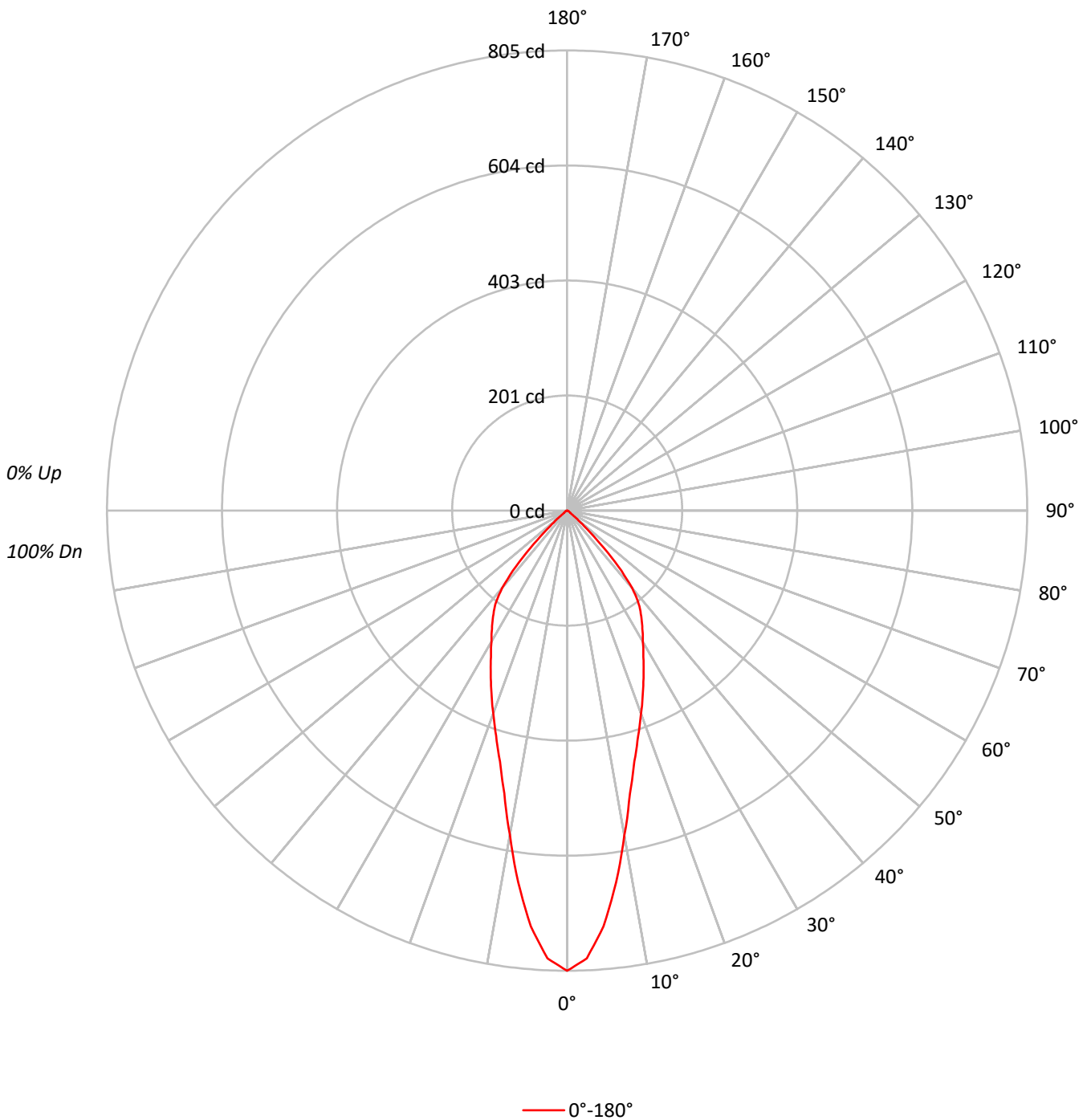
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93
2	108	102	98	95	105	101	97	94	97	94	92	94	92	90	92	90	88	86
3	102	95	90	86	100	94	89	85	91	87	83	88	85	82	86	83	81	79
4	96	88	82	78	94	87	82	77	85	80	77	83	79	76	81	78	75	73
5	91	82	76	71	89	81	75	71	79	74	70	78	73	70	76	72	69	68
6	86	77	70	66	85	76	70	66	74	69	65	73	68	65	72	67	64	63
7	82	72	65	61	80	71	65	61	70	64	61	69	64	60	67	63	60	58
8	77	67	61	57	76	67	61	57	66	60	56	65	60	56	64	59	56	54
9	73	63	57	53	72	63	57	53	62	56	53	61	56	52	60	56	52	51
10	70	60	54	50	69	59	53	50	58	53	49	58	53	49	57	52	49	48

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

	0°
0°	77985
5°	70989
10°	56759
15°	45533
20°	38969
25°	33777
30°	29643
35°	26727
40°	22384
45°	11234
50°	2864
55°	1182
60°	775
65°	688
70°	566
75°	0
80°	0
85°	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	64.7	11.6	11.7
10°-20°	128.4	23.1	23.1
20°-30°	145.7	26.2	26.3
30°-40°	140.0	25.2	25.2
40°-50°	66.6	12.0	12.0
50°-60°	7.4	1.3	1.3
60°-70°	3.0	0.5	0.5
70°-80°	0.5	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°	338.8	60.9	61.0
0°-40°	478.8	86.1	86.3
0°-60°	552.8	99.4	99.6
0°-90°	556.3	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°	556.3	100.0	100.2

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	805	
5°	730	65
15°	454	128
25°	316	146
35°	226	140
45°	82	67
55°	7	7
65°	3	3
75°	0	1
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	805
2.5°	784
5°	730
7.5°	656
10°	577
12.5°	507
15°	454
17.5°	413
20°	378
22.5°	346
25°	316
27.5°	289
30°	265
32.5°	245
35°	226
37.5°	206
40°	177
42.5°	133
45°	82
47.5°	40
50°	19
52.5°	10
55°	7
57.5°	5
60°	4
62.5°	4
65°	3
67.5°	2
70°	2
72.5°	1
75°	0
77.5°	0
80°	0
82.5°	0
85°	0
87.5°	0
90°	0

(END OF REPORT)