

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: P20346

Luminaire Tested: **EL405830-TL400TBZ**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P20346  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: EL405830-TL400TBZ  
Description: HALO 4 INCH RECESSED LED DOWNLIGHT WITH TUSCAN BRONZE FINISH  
REFLECTOR EL405830-TL400TBZ  
Light Source: (1)SURFACE MOUNT LED  
14 WATTS  
Ballast/Driver: 120 VOLT ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: 477 (1 lamp)  
Luminaire Lumens: 476.7 lumens  
Efficiency: 99.9%  
Efficacy: 34.1 lumens/watt  
Spacing Criteria (0/90/45): 1.38 / 1.38 / 1.25  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

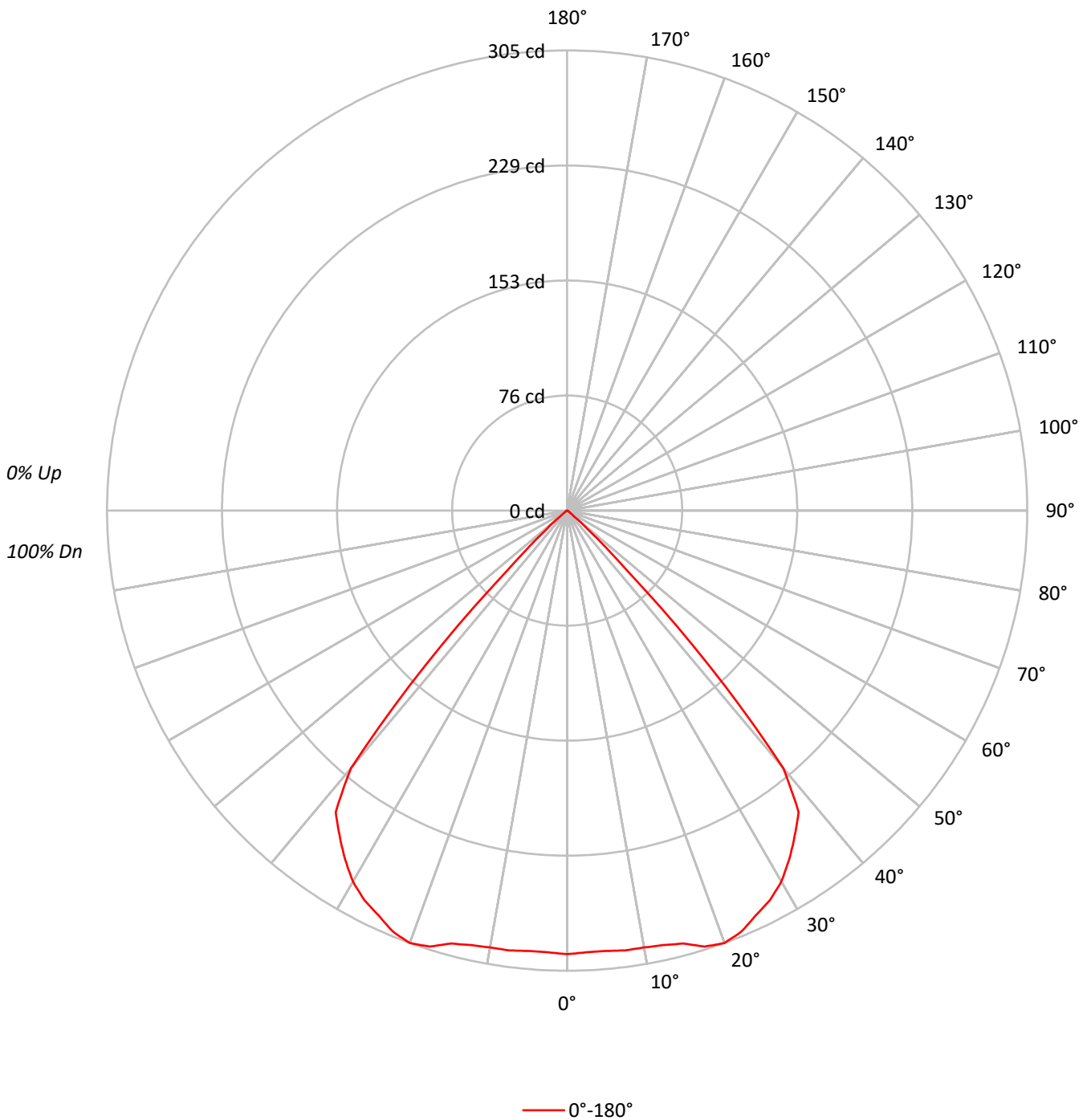
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92
2	107	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86	84
3	100	93	88	83	98	92	87	83	89	85	81	87	83	80	84	81	79	77
4	94	86	80	75	92	85	79	75	82	78	74	80	76	73	79	75	72	70
5	89	79	73	68	87	78	72	68	76	71	67	75	70	66	73	69	66	64
6	83	73	67	62	82	72	66	62	71	65	61	69	64	61	68	64	60	59
7	78	68	61	56	77	67	61	56	66	60	56	65	59	56	63	59	55	54
8	74	63	56	52	72	62	56	52	61	55	51	60	55	51	59	54	51	49
9	69	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45
10	66	55	48	44	64	54	48	44	53	48	44	53	47	44	52	47	43	42

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

	0°
0°	28481
5°	28493
10°	28921
15°	29787
20°	31443
25°	31640
30°	31769
35°	31103
40°	28201
45°	7535
50°	904
55°	338
60°	194
65°	229
70°	0
75°	0
80°	0
85°	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	28.0	5.9	5.9
10°-20°	84.8	17.8	17.8
20°-30°	136.7	28.7	28.6
30°-40°	163.1	34.2	34.2
40°-50°	61.4	12.9	12.9
50°-60°	2.1	0.4	0.4
60°-70°	0.6	0.1	0.1
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°	249.5	52.3	52.3
0°-40°	412.6	86.6	86.5
0°-60°	476.1	99.9	99.8
0°-90°	476.7	100.0	99.9
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°	476.7	100.0	99.9

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	294	
5°	293	28
15°	297	85
25°	296	137
35°	263	163
45°	55	61
55°	2	2
65°	1	1
75°	0	0
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	294
2.5°	293
5°	293
7.5°	294
10°	294
12.5°	295
15°	297
17.5°	303
20°	305
22.5°	302
25°	296
27.5°	291
30°	284
32.5°	274
35°	263
37.5°	252
40°	223
42.5°	139
45°	55
47.5°	21
50°	6
52.5°	3
55°	2
57.5°	1
60°	1
62.5°	1
65°	1
67.5°	0
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)