

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: P20327

Luminaire Tested: **EL405835-TL400TBZ**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P20327  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: EL405835-TL400TBZ  
Description: HALO 4 INCH RECESSED LED DOWNLIGHT WITH TUSCAN BRONZE FINISH  
REFLECTOR EL405835-TL400TBZ  
Light Source: (1)SURFACE MOUNT LED  
14 WATTS  
Ballast/Driver: 120 VOLT ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: 467 (1 lamp)  
Luminaire Lumens: 467.0 lumens  
Efficiency: 100.0%  
Efficacy: 33.6 lumens/watt  
Spacing Criteria (0/90/45): 1.38 / 1.38 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

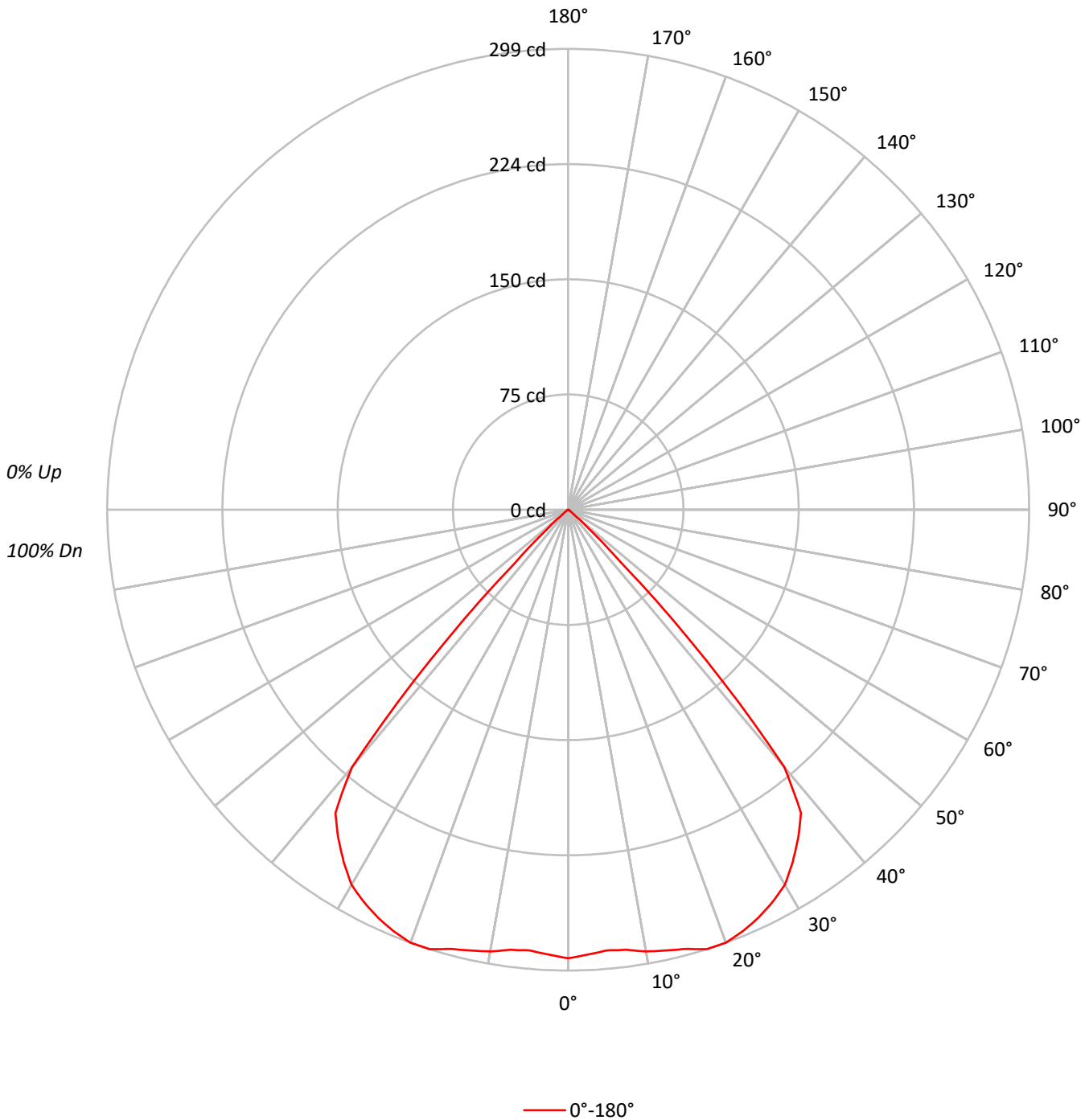
Input Watts (W): 13.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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		97	95	94	92
2	107	101	97	93	104	100	96	92	96	93	90		93	91	88		90	88	86	85
3	100	93	88	83	98	92	87	83	89	85	81		87	83	80		84	81	79	77
4	94	86	80	75	93	85	79	75	83	78	74		81	76	73		79	75	72	70
5	89	79	73	68	87	78	72	68	77	71	67		75	70	67		73	69	66	64
6	83	74	67	62	82	73	66	62	71	66	61		70	65	61		68	64	60	59
7	79	68	61	57	77	67	61	56	66	60	56		65	60	56		64	59	56	54
8	74	63	57	52	73	63	56	52	61	56	52		60	55	51		59	55	51	50
9	70	59	52	48	68	58	52	48	57	52	47		56	51	47		55	51	47	46
10	66	55	48	44	65	54	48	44	54	48	44		53	47	44		52	47	44	42

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

	0°
0°	28191
5°	27909
10°	28626
15°	29586
20°	30825
25°	31212
30°	31433
35°	30748
40°	27569
45°	6713
50°	754
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°	27.6	5.9	5.9
10°-20°	83.9	18.0	18.0
20°-30°	134.6	28.8	28.8
30°-40°	160.8	34.4	34.4
40°-50°	57.6	12.3	12.3
50°-60°	2.0	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°	246.0	52.7	52.7
0°-40°	406.9	87.1	87.1
0°-60°	466.4	99.9	99.9
0°-90°	467.0	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°	467.0	100.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	291	
5°	287	28
15°	295	84
25°	292	135
35°	260	161
45°	49	58
55°	2	2
65°	1	1
75°	0	0
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	291
2.5°	289
5°	287
7.5°	288
10°	291
12.5°	293
15°	295
17.5°	299
20°	299
22.5°	296
25°	292
27.5°	287
30°	281
32.5°	271
35°	260
37.5°	248
40°	218
42.5°	132
45°	49
47.5°	17
50°	5
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)