

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: P20335

Luminaire Tested: **EL405840-TL400TBZ**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P20335
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: EL405840-TL400TBZ
Description: HALO 4 INCH RECESSED LED DOWNLIGHT WITH TUSCAN BRONZE FINISH
REFLECTOR EL405840-TL400TBZ
Light Source: (1)SURFACE MOUNT LED
14 WATTS
Ballast/Driver: 120 VOLT ELECTRONIC DRIVER

Summary

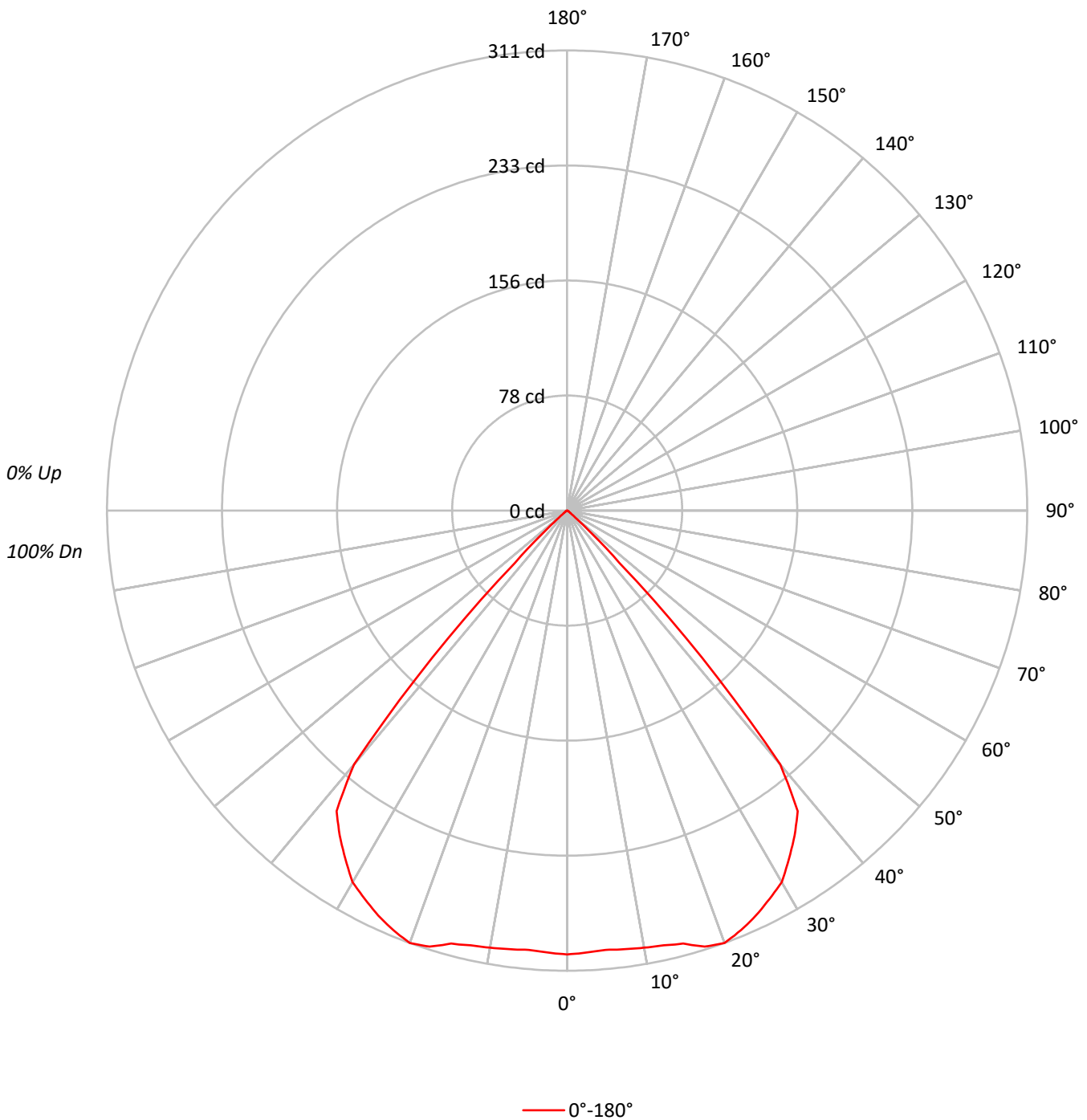
Lumens per Lamp: 481 (1 lamp)
Luminaire Lumens: 481.5 lumens
Efficiency: 100.1%
Efficacy: 34.6 lumens/watt
Spacing Criteria (0/90/45): 1.38 / 1.38 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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	111	108	105	103	104	102	100	100	99	97	97	95	94	92
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	91	88	86	85
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77
4	95	86	80	75	93	85	79	75	83	78	74	81	76	73	79	75	72	71
5	89	80	73	68	87	79	73	68	77	71	67	75	70	67	73	69	66	64
6	84	74	67	62	82	73	66	62	71	66	61	70	65	61	68	64	61	59
7	79	68	61	57	77	68	61	57	66	60	56	65	60	56	64	59	56	54
8	74	63	57	52	73	63	56	52	62	56	52	60	55	51	59	55	51	50
9	70	59	52	48	69	58	52	48	57	52	48	56	51	47	56	51	47	46
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	29063
5°	28979
10°	29511
15°	30389
20°	32062
25°	32281
30°	32440
35°	31695
40°	28327
45°	6850
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°	28.5	5.9	5.9
10°-20°	86.5	18.0	18.0
20°-30°	139.2	28.9	28.9
30°-40°	165.8	34.4	34.5
40°-50°	58.9	12.2	12.2
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°	254.3	52.8	52.9
0°-40°	420.1	87.2	87.3
0°-60°	480.9	99.9	100.0
0°-90°	481.5	100.0	100.1
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°	481.5	100.0	100.1

CANDELA DISTRIBUTION:

	0°	Flux
0°	300	
5°	298	29
15°	303	87
25°	302	139
35°	268	166
45°	50	59
55°	2	2
65°	1	1
75°	0	0
85°	0	0
90°	0	



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CANDELA DISTRIBUTION (FULL):

0°	
0°	300
2.5°	299
5°	298
7.5°	299
10°	300
12.5°	301
15°	303
17.5°	309
20°	311
22.5°	307
25°	302
27.5°	296
30°	290
32.5°	279
35°	268
37.5°	256
40°	224
42.5°	135
45°	50
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)