

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: P20082

Luminaire Tested: **EL405840-TL400SC**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P20082  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: EL405840-TL400SC  
Description: HALO 4 INCH RECESSED LED DOWNLIGHT WITH SPECULAR REFLECTOR IN TRIM UNIT 1 LED MODULE EL405840  
Light Source: (1)SURFACE MOUNT LED  
14 WATTS  
Ballast/Driver: 120 VOLT ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: 699.6 (1 lamp)  
Luminaire Lumens: 700.1 lumens  
Efficiency: 100.1%  
Efficacy: 49.3 lumens/watt  
Spacing Criteria (0/90/45): 1.48 / 1.48 / 1.27  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

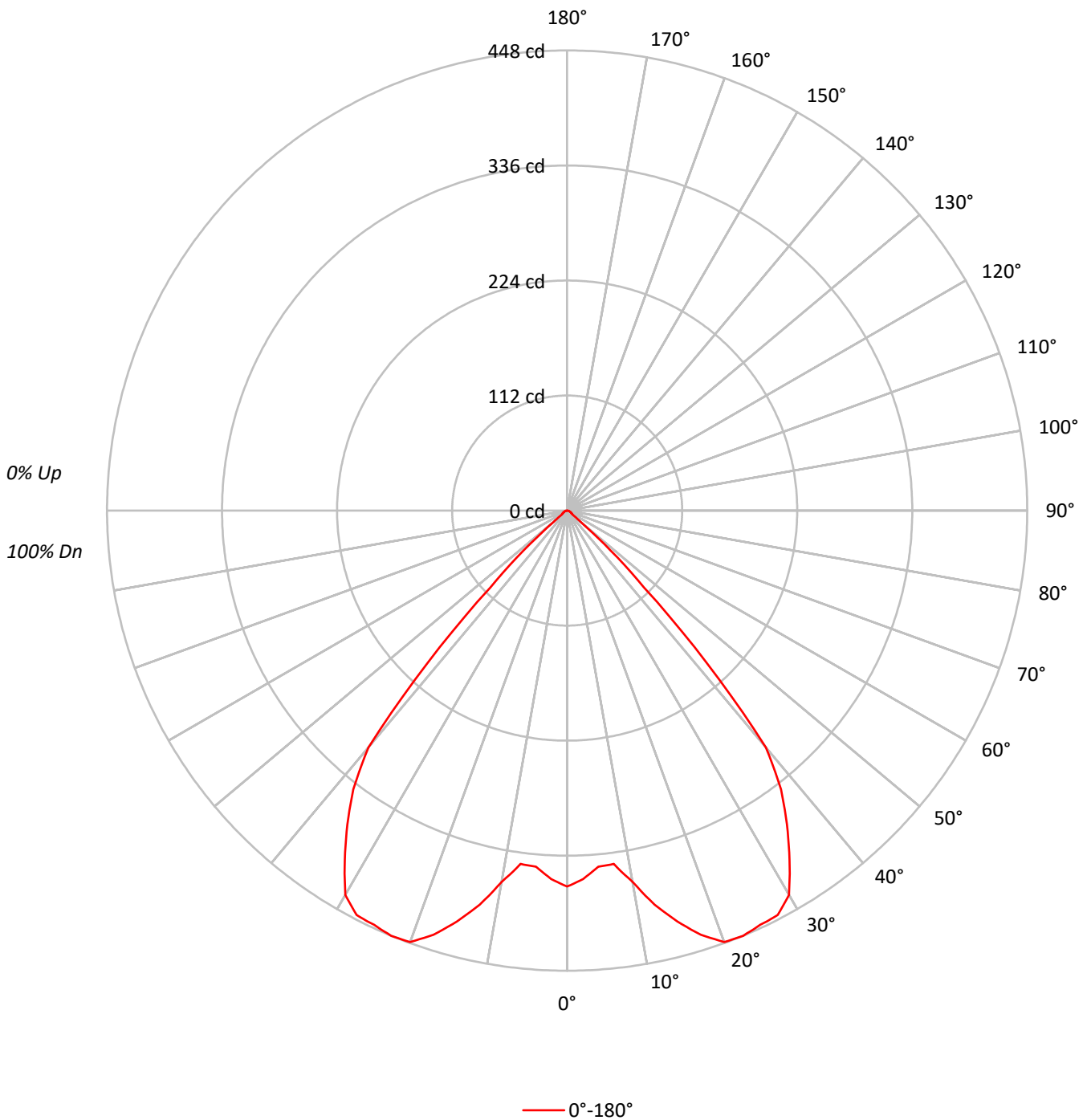
Input Watts (W): 14.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	84	80	78	76
4	94	85	79	74	92	84	78	73	82	77	73	80	75	72	78	74	71	69
5	88	78	72	67	86	77	71	66	75	70	66	74	69	65	72	68	65	63
6	83	72	65	60	81	71	65	60	70	64	60	68	63	59	67	62	59	57
7	77	67	60	55	76	66	60	55	65	59	55	63	58	54	62	58	54	52
8	73	62	55	50	71	61	55	50	60	54	50	59	54	50	58	53	49	48
9	69	57	51	46	67	57	50	46	56	50	46	55	50	46	54	49	45	44
10	65	53	47	42	63	53	47	42	52	46	42	51	46	42	50	46	42	40

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

	0°
0°	45144
5°	43088
10°	45966
15°	52866
20°	58674
25°	60563
30°	61529
35°	56165
40°	48466
45°	18490
50°	3262
55°	1290
60°	1233
65°	1167
70°	1082
75°	953
80°	710
85°	1415



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	33.8	4.8	4.8
10°-20°	117.9	16.8	16.8
20°-30°	205.4	29.3	29.4
30°-40°	231.6	33.1	33.1
40°-50°	98.2	14.0	14.0
50°-60°	6.4	0.9	0.9
60°-70°	3.7	0.5	0.5
70°-80°	2.1	0.3	0.3
80°-90°	1.0	0.1	0.1
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°	357.0	51.0	51.0
0°-40°	588.6	84.1	84.1
0°-60°	693.3	99.0	99.1
0°-90°	700.1	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°	700.1	100.0	100.1

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	366	
5°	348	34
15°	414	118
25°	445	205
35°	373	232
45°	106	98
55°	6	6
65°	4	4
75°	2	2
85°	1	1
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	366
2.5°	359
5°	348
7.5°	347
10°	367
12.5°	393
15°	414
17.5°	433
20°	447
22.5°	448
25°	445
27.5°	444
30°	432
32.5°	403
35°	373
37.5°	342
40°	301
42.5°	201
45°	106
47.5°	57
50°	17
52.5°	7
55°	6
57.5°	5
60°	5
62.5°	4
65°	4
67.5°	3
70°	3
72.5°	2
75°	2
77.5°	2
80°	1
82.5°	1
85°	1
87.5°	1
90°	0

(END OF REPORT)