

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: P20326

Luminaire Tested: **EL405835-TL400SN**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P20326  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: EL405835-TL400SN  
Description: HALO 4 INCH RECESSED LED DOWNLIGHT WITH SATIN NICKEL FINISH  
REFLECTOR EL405835-TL400SN  
Light Source: (1)SURFACE MOUNT LED  
14 WATTS  
Ballast/Driver: 120 VOLT ELECTRONIC DRIVER

**Summary**

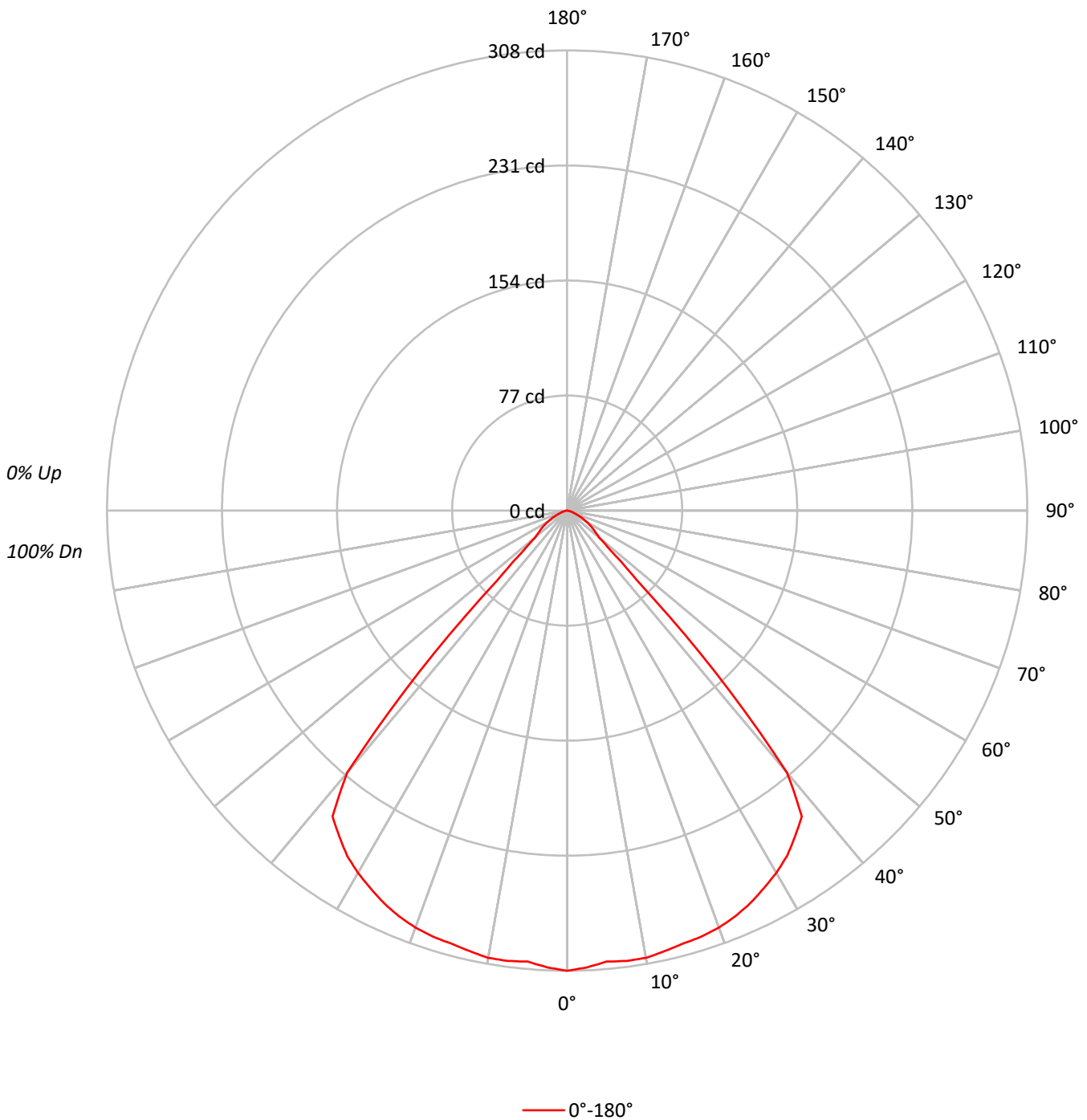
Lumens per Lamp: 515 (1 lamp)  
Luminaire Lumens: 516.0 lumens  
Efficiency: 100.2%  
Efficacy: 37.1 lumens/watt  
Spacing Criteria (0/90/45): 1.34 / 1.34 / 1.25  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 13.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	113	109	107	104	110	107	105	102	103	101	99		99	98	96		96	95	93	91
2	106	100	95	91	103	98	94	90	95	91	88		92	89	86		89	87	84	83
3	99	91	86	81	97	90	85	80	87	83	79		85	81	78		82	79	76	75
4	93	84	77	72	91	83	77	72	80	75	71		78	74	70		76	72	69	68
5	87	77	70	65	85	76	70	65	74	68	64		72	67	64		71	66	63	61
6	82	71	64	59	80	70	63	59	69	63	58		67	62	58		66	61	57	56
7	76	66	58	54	75	65	58	53	63	57	53		62	57	53		61	56	52	51
8	72	61	54	49	71	60	53	49	59	53	49		58	52	48		57	52	48	46
9	68	56	49	45	66	56	49	45	55	49	45		54	48	44		53	48	44	43
10	64	52	46	41	63	52	46	41	51	45	41		50	45	41		49	44	41	39

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

	0°
0°	29838
5°	29465
10°	29904
15°	30088
20°	30619
25°	30998
30°	31321
35°	31458
40°	28960
45°	9042
50°	4220
55°	3547
60°	2906
65°	2292
70°	1416
75°	1123
80°	558
85°	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	29.0	5.6	5.6
10°-20°	85.1	16.5	16.5
20°-30°	133.7	25.9	26.0
30°-40°	164.8	31.9	32.0
40°-50°	71.5	13.8	13.9
50°-60°	18.8	3.7	3.7
60°-70°	9.6	1.9	1.9
70°-80°	3.2	0.6	0.6
80°-90°	0.4	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°	247.8	48.0	48.1
0°-40°	412.6	79.9	80.1
0°-60°	502.9	97.4	97.6
0°-90°	516.0	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°	516.0	100.0	100.2

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	308	
5°	303	29
15°	300	85
25°	290	134
35°	266	165
45°	66	71
55°	21	19
65°	10	10
75°	3	3
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	308
2.5°	306
5°	303
7.5°	304
10°	304
12.5°	302
15°	300
17.5°	299
20°	297
22.5°	294
25°	290
27.5°	285
30°	280
32.5°	274
35°	266
37.5°	258
40°	229
42.5°	147
45°	66
47.5°	39
50°	28
52.5°	24
55°	21
57.5°	18
60°	15
62.5°	12
65°	10
67.5°	7
70°	5
72.5°	4
75°	3
77.5°	2
80°	1
82.5°	1
85°	0
87.5°	0
90°	0

(END OF REPORT)