

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: P20360

Luminaire Tested: **EL405827-TL403BBS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P20360  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: EL405827-TL403BBS  
Description: HALO 4 INCH RECESSED LED DOWNLIGHT WITH BLACK  
BAFFLED FINISH REFLECTOR AND PRISMATIC LENS IN TRIM EL405827-TL403BBS  
Light Source: (1)SURFACE MOUNT LED  
14 WATTS  
Ballast/Driver: 120 VOLT ELECTRONIC DRIVER

**Summary**

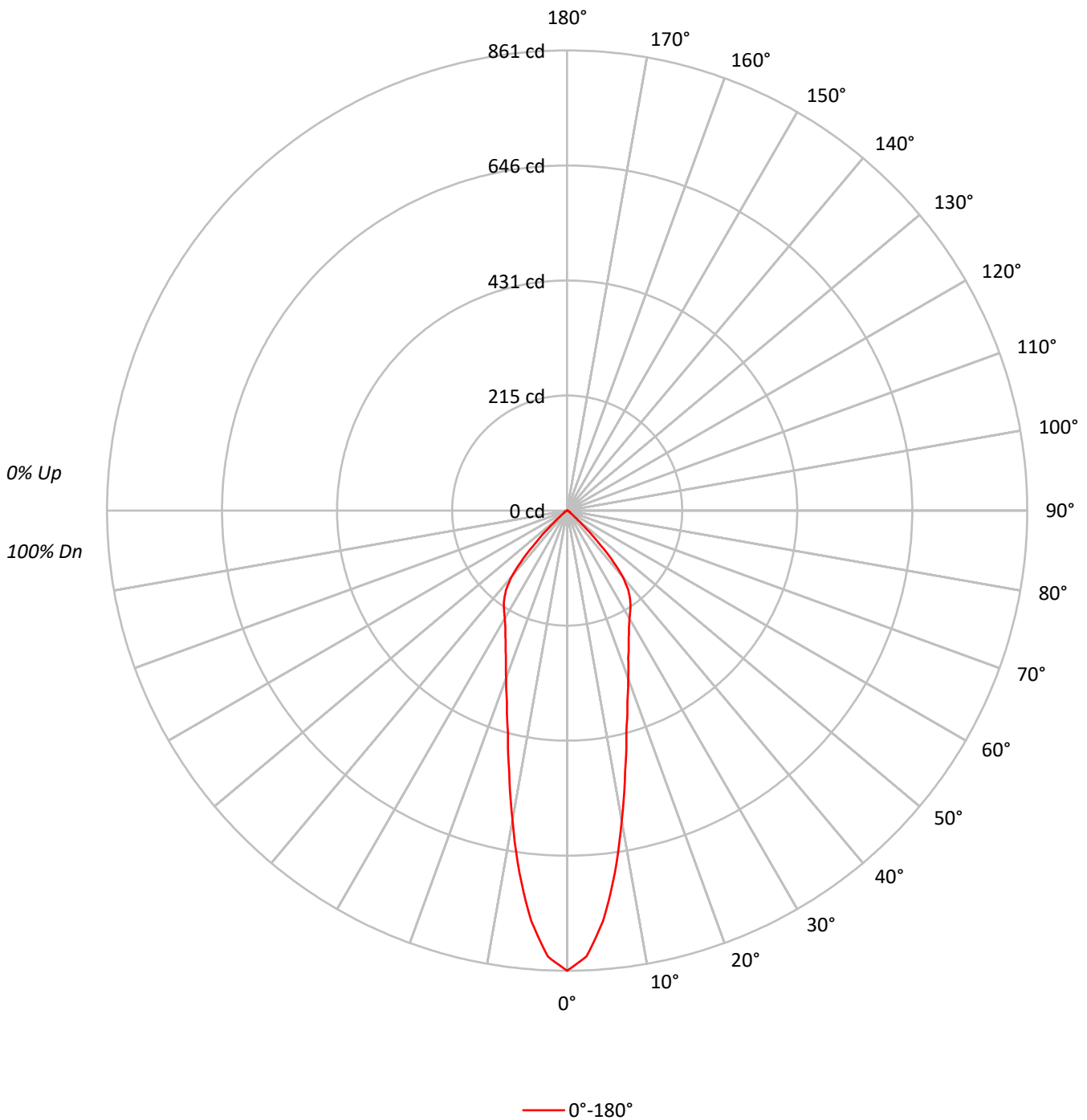
Lumens per Lamp: 514 (1 lamp)  
Luminaire Lumens: 515.5 lumens  
Efficiency: 100.3%  
Efficacy: 37.4 lumens/watt  
Spacing Criteria (0/90/45): 0.48 / 0.48 / 0.63  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 13.8  
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	117	117	117	117	111	111	111		107	107	107		102	102	102	100
1	114	111	108	106	111	108	106	104	104	102	101		101	99	98		97	96	95	93
2	108	102	98	95	105	101	97	94	97	94	92		94	92	90		92	90	88	86
3	102	95	90	86	100	94	89	85	91	87	84		89	85	82		86	83	81	79
4	96	88	83	78	95	87	82	78	85	80	77		83	79	76		81	78	75	73
5	91	82	76	72	90	82	76	72	80	75	71		78	74	70		76	73	70	68
6	86	77	71	66	85	76	70	66	75	70	66		73	69	65		72	68	65	63
7	82	72	66	62	81	72	66	61	70	65	61		69	64	61		68	64	60	59
8	78	68	62	57	77	67	61	57	66	61	57		65	60	57		64	60	57	55
9	74	64	58	54	73	64	58	54	63	57	53		62	57	53		61	56	53	52
10	71	60	54	51	69	60	54	50	59	54	50		58	54	50		58	53	50	49

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

	0°
0°	83410
5°	74976
10°	57940
15°	42925
20°	34433
25°	29074
30°	26064
35°	24362
40°	20487
45°	10001
50°	2411
55°	1182
60°	969
65°	917
70°	566
75°	374
80°	558
85°	1112



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	67.7	13.1	13.2
10°-20°	121.4	23.6	23.6
20°-30°	126.5	24.5	24.6
30°-40°	126.6	24.6	24.6
40°-50°	60.1	11.7	11.7
50°-60°	7.2	1.4	1.4
60°-70°	3.6	0.7	0.7
70°-80°	1.4	0.3	0.3
80°-90°	1.0	0.2	0.2
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°	315.6	61.2	61.4
0°-40°	442.2	85.8	86.0
0°-60°	509.6	98.8	99.1
0°-90°	515.5	100.0	100.3
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°	515.5	100.0	100.3

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	861	
5°	771	68
15°	428	121
25°	272	126
35°	206	127
45°	73	60
55°	7	7
65°	4	4
75°	1	1
85°	1	1
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	861
2.5°	835
5°	771
7.5°	684
10°	589
12.5°	501
15°	428
17.5°	375
20°	334
22.5°	299
25°	272
27.5°	250
30°	233
32.5°	220
35°	206
37.5°	188
40°	162
42.5°	122
45°	73
47.5°	35
50°	16
52.5°	9
55°	7
57.5°	6
60°	5
62.5°	4
65°	4
67.5°	3
70°	2
72.5°	2
75°	1
77.5°	1
80°	1
82.5°	1
85°	1
87.5°	1
90°	0

(END OF REPORT)