

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: P20331

Luminaire Tested: **EL405835-TL403BBS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P20331  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: EL405835-TL403BBS  
Description: HALO 4 INCH RECESSED LED DOWNLIGHT WITH BLACK  
BAFFLED FINISH REFLECTOR AND PRISMATIC LENS IN TRIM EL405835-TL403BBS  
Light Source: (1)SURFACE MOUNT LED  
14 WATTS  
Ballast/Driver: 120 VOLT ELECTRONIC DRIVER

**Summary**

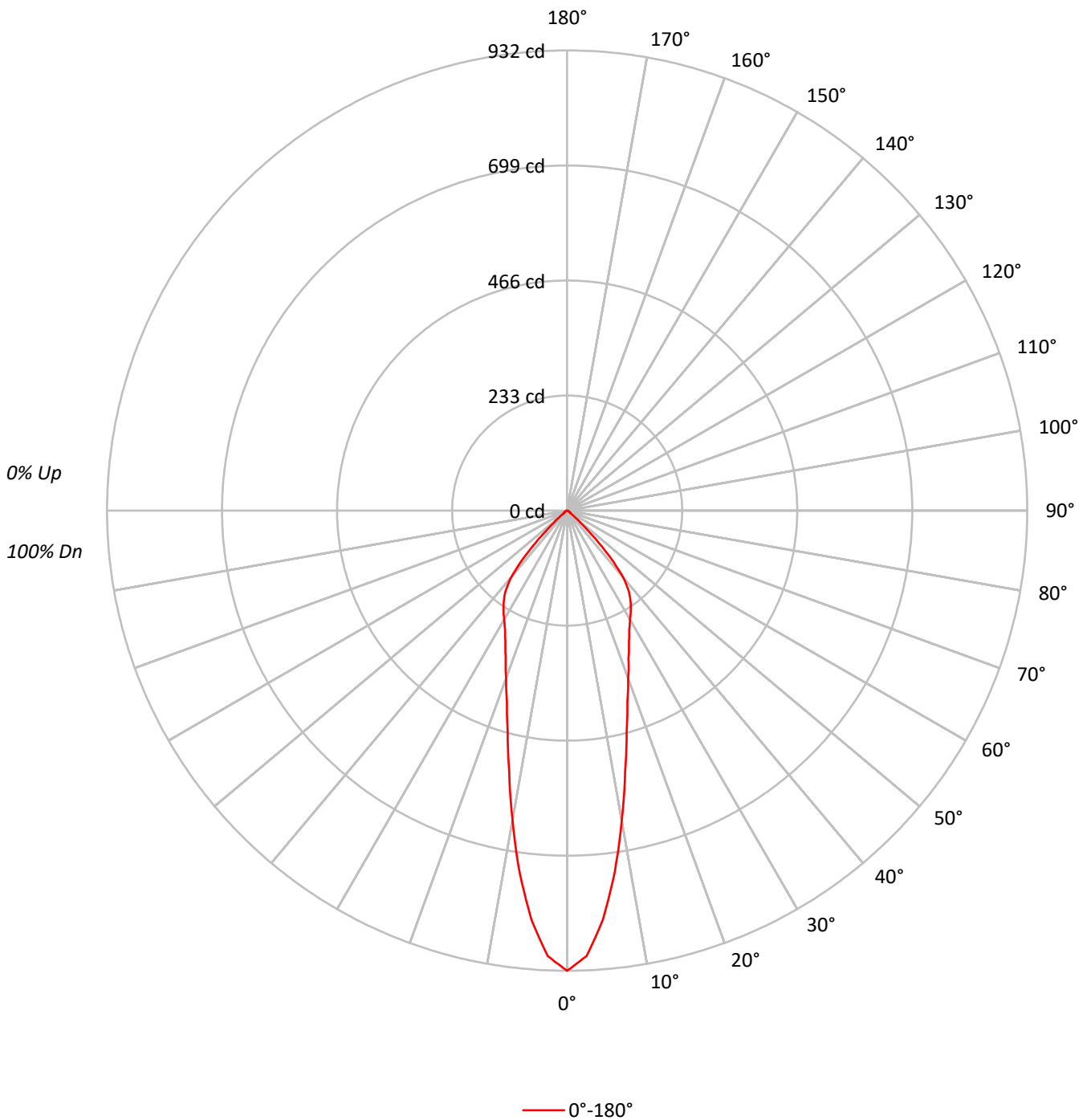
Lumens per Lamp: 559 (1 lamp)  
Luminaire Lumens: 560.8 lumens  
Efficiency: 100.3%  
Efficacy: 40.3 lumens/watt  
Spacing Criteria (0/90/45): 0.48 / 0.48 / 0.63  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 13.9  
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	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	103	101	101	99	98	97	96	95	93			
2	108	102	98	95	105	101	97	94	97	94	91	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	94	87	82	78	85	80	77	83	79	76	81	78	75	73			
5	91	82	76	72	90	81	76	71	80	75	71	78	74	70	76	73	70	68			
6	86	77	71	66	85	76	70	66	75	69	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	56	55			
9	74	64	58	54	73	63	58	54	62	57	53	62	57	53	61	56	53	52			
10	70	60	54	50	69	60	54	50	59	54	50	58	53	50	58	53	50	49			

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

	0°
0°	90288
5°	80811
10°	62662
15°	46636
20°	37320
25°	31640
30°	28525
35°	26491
40°	22384
45°	11097
50°	2713
55°	1351
60°	1163
65°	917
70°	850
75°	374
80°	558
85°	1112



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	73.1	13.0	13.1
10°-20°	131.6	23.5	23.5
20°-30°	137.6	24.5	24.6
30°-40°	138.1	24.6	24.7
40°-50°	65.9	11.7	11.8
50°-60°	8.0	1.4	1.4
60°-70°	4.1	0.7	0.7
70°-80°	1.6	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°	342.3	61.0	61.2
0°-40°	480.4	85.7	85.9
0°-60°	554.2	98.8	99.1
0°-90°	560.8	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°	560.8	100.0	100.3

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	932	
5°	831	73
15°	465	132
25°	296	138
35°	224	138
45°	81	66
55°	8	8
65°	4	4
75°	1	2
85°	1	1
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	932
2.5°	903
5°	831
7.5°	738
10°	637
12.5°	542
15°	465
17.5°	406
20°	362
22.5°	325
25°	296
27.5°	272
30°	255
32.5°	240
35°	224
37.5°	205
40°	177
42.5°	132
45°	81
47.5°	39
50°	18
52.5°	10
55°	8
57.5°	6
60°	6
62.5°	5
65°	4
67.5°	3
70°	3
72.5°	2
75°	1
77.5°	1
80°	1
82.5°	1
85°	1
87.5°	1
90°	0

(END OF REPORT)