

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: P20341

Luminaire Tested: **EL405840-TL403BBS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P20341
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: EL405840-TL403BBS
Description: HALO 4 INCH RECESSED LED DOWNLIGHT WITH BLACK
BAFFLED FINISH REFLECTOR AND PRISMATIC LENS IN TRIM EL405840-TL403BBS
Light Source: (1)SURFACE MOUNT LED
14 WATTS
Ballast/Driver: 120 VOLT ELECTRONIC DRIVER

Summary

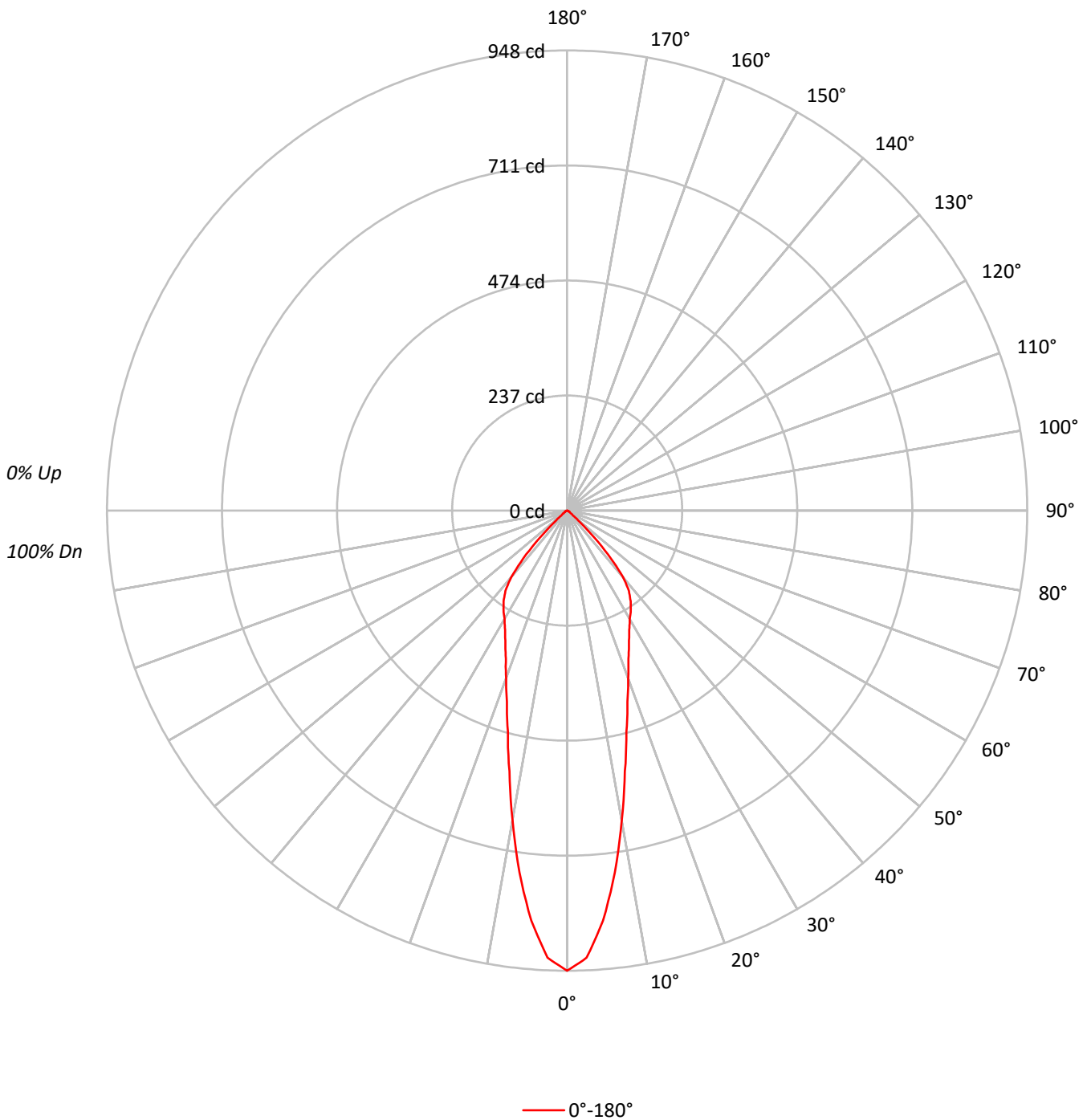
Lumens per Lamp: 567 (1 lamp)
Luminaire Lumens: 569.2 lumens
Efficiency: 100.4%
Efficacy: 40.9 lumens/watt
Spacing Criteria (0/90/45): 0.48 / 0.48 / 0.63
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 13.9
Input Voltage (V): NR
Input Current (A_{in}): 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	120	120	120	120	117	117	117	117	112	112	112	107	107	107	102	102	102	100
1	114	111	108	106	111	109	106	104	104	103	101	101	99	98	97	96	95	93
2	108	103	98	95	105	101	97	94	98	94	92	95	92	90	92	90	88	86
3	102	95	90	86	100	94	89	85	91	87	84	89	85	82	86	84	81	79
4	96	88	83	78	95	87	82	78	85	81	77	83	79	76	81	78	75	73
5	91	83	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	61	54	50	70	60	54	50	59	54	50	58	54	50	58	53	50	49

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	91838
5°	82464
10°	63744
15°	47338
20°	37938
25°	32174
30°	28860
35°	26964
40°	22637
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°	74.5	13.1	13.1
10°-20°	133.7	23.5	23.6
20°-30°	139.8	24.6	24.7
30°-40°	140.3	24.7	24.8
40°-50°	66.2	11.6	11.7
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°	348.0	61.1	61.4
0°-40°	488.4	85.8	86.1
0°-60°	562.6	98.8	99.2
0°-90°	569.2	100.0	100.4
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°	569.2	100.0	100.4

CANDELA DISTRIBUTION:

	0°	Flux
0°	948	
5°	848	75
15°	472	134
25°	301	140
35°	228	140
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°	948
2.5°	922
5°	848
7.5°	752
10°	648
12.5°	550
15°	472
17.5°	413
20°	368
22.5°	330
25°	301
27.5°	277
30°	258
32.5°	244
35°	228
37.5°	209
40°	179
42.5°	134
45°	81
47.5°	38
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)