

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: P20089

Luminaire Tested: **EL405840-TL402WBS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P20089
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: EL405840-TL402WBS
Description: HALO 4 INCH RECESSED LED DOWNLIGHT WITH WHITE PAINTED BAFFLE
DESIGN REFLECTOR IN TRIM WITH PRISMATIC LENS IN UNIT 1 LED
MODULE EL405840
Light Source: (1)SURFACE MOUNT LED
14 WATTS
Ballast/Driver: 120 VOLT ELECTRONIC DRIVER

Summary

Lumens per Lamp: 623 (1 lamp)
Luminaire Lumens: 625.1 lumens
Efficiency: 100.3%
Efficacy: 43.7 lumens/watt
Spacing Criteria (0/90/45): 0.63 / 0.63 / 0.82
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

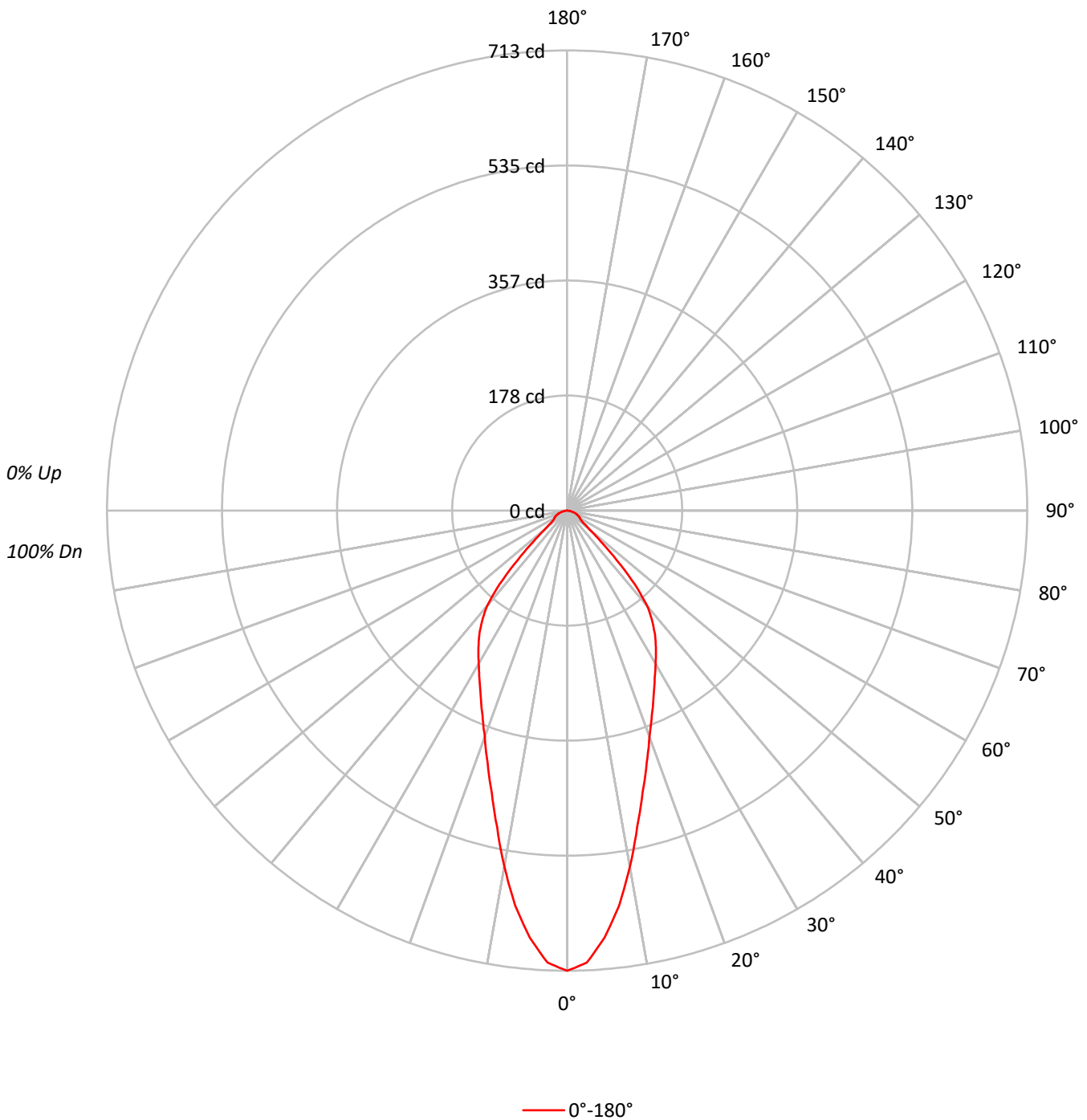
Input Watts (W): 14.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	119	119	119	119	117	117	117	117	111	111	111	107	107	107	102	102	102	100
1	113	109	106	104	110	107	104	102	103	101	99	99	97	96	96	94	93	91
2	106	100	95	91	103	98	94	90	95	91	88	92	89	86	89	86	84	82
3	99	92	86	81	97	90	85	80	87	83	79	85	81	78	83	79	77	75
4	93	84	78	73	91	83	77	73	81	76	72	79	74	71	77	73	70	68
5	88	78	71	66	86	77	71	66	75	70	65	73	68	65	72	67	64	62
6	83	72	65	61	81	72	65	60	70	64	60	68	63	59	67	63	59	57
7	78	67	60	56	77	67	60	55	65	59	55	64	59	55	63	58	55	53
8	74	63	56	51	72	62	56	51	61	55	51	60	55	51	59	54	51	49
9	70	59	52	48	69	58	52	48	57	52	47	56	51	47	55	51	47	46
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	48	44	43

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	87945
5°	82214
10°	70139
15°	57719
20°	48961
25°	43143
30°	39025
35°	35837
40°	31076
45°	19014
50°	8635
55°	5806
60°	5674
65°	5545
70°	5410
75°	4766
80°	3552
85°	2830



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	60.1	9.6	9.7
10°-20°	127.0	20.3	20.4
20°-30°	146.5	23.4	23.5
30°-40°	147.4	23.6	23.7
40°-50°	86.0	13.8	13.8
50°-60°	26.1	4.2	4.2
60°-70°	18.8	3.0	3.0
70°-80°	10.5	1.7	1.7
80°-90°	2.6	0.4	0.4
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°	333.7	53.4	53.6
0°-40°	481.0	77.0	77.2
0°-60°	593.1	94.9	95.2
0°-90°	625.1	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°	625.1	100.0	100.3

CANDELA DISTRIBUTION:

	0°	Flux
0°	713	
5°	664	60
15°	452	127
25°	317	146
35°	238	147
45°	109	86
55°	27	26
65°	19	19
75°	10	11
85°	2	3
90°	0	



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CANDELA DISTRIBUTION (FULL):

	0°
0°	713
2.5°	701
5°	664
7.5°	617
10°	560
12.5°	502
15°	452
17.5°	410
20°	373
22.5°	343
25°	317
27.5°	294
30°	274
32.5°	256
35°	238
37.5°	217
40°	193
42.5°	155
45°	109
47.5°	70
50°	45
52.5°	32
55°	27
57.5°	24
60°	23
62.5°	21
65°	19
67.5°	17
70°	15
72.5°	13
75°	10
77.5°	7
80°	5
82.5°	4
85°	2
87.5°	1
90°	0

(END OF REPORT)