

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: P20339

Luminaire Tested: **EL405840-TL402TBZS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P20339
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: EL405840-TL402TBZS
Description: HALO 4 INCH RECESSED LED DOWNLIGHT WITH TUSCAN BRONZE FINISH
REFLECTOR AND PRISMATIC LENS IN TRIM EL405840-TL402TBZS
Light Source: (1)SURFACE MOUNT LED
14 WATTS
Ballast/Driver: 120 VOLT ELECTRONIC DRIVER

Summary

Lumens per Lamp: 553 (1 lamp)
Luminaire Lumens: 554.2 lumens
Efficiency: 100.2%
Efficacy: 39.9 lumens/watt
Spacing Criteria (0/90/45): 0.52 / 0.52 / 0.7
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

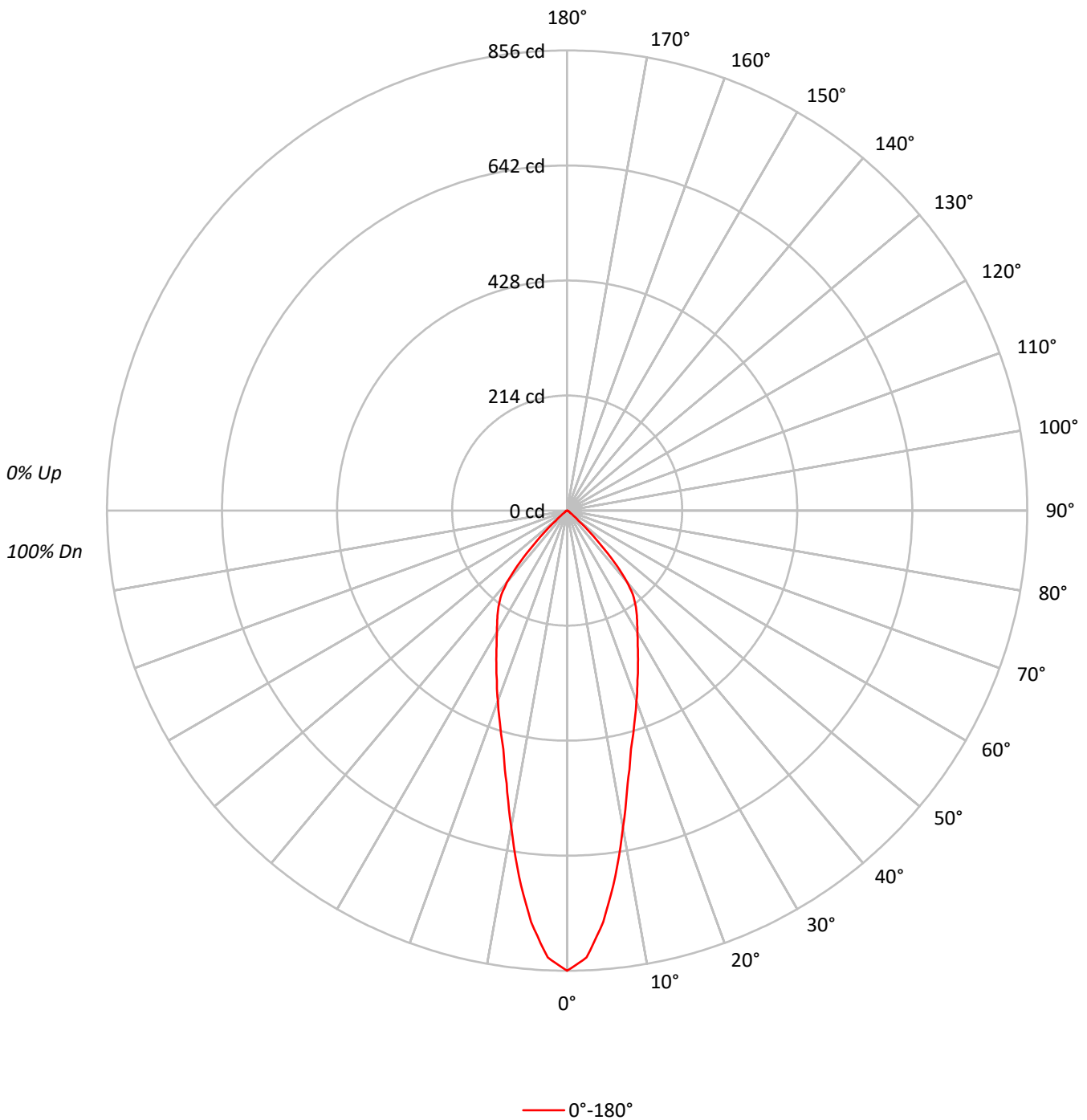
Input Watts (W): 13.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	119	119	119	119	117	117	117	117	111	111	111		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	80
4	96	89	83	78	95	87	82	78	85	81	77		83	79	76		81	78	75	74
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	76	67	61	57	66	61	57		65	60	57		64	60	56	55
9	74	64	58	54	73	63	58	53	62	57	53		61	57	53		61	56	53	52
10	70	60	54	50	69	60	54	50	59	54	50		58	53	50		57	53	50	48

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	82925
5°	74685
10°	58825
15°	46034
20°	38866
25°	33350
30°	29196
35°	26491
40°	22004
45°	10686
50°	2411
55°	1013
60°	775
65°	688
70°	283
75°	0
80°	0
85°	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	67.9	12.2	12.3
10°-20°	130.2	23.5	23.5
20°-30°	143.9	26.0	26.0
30°-40°	138.4	25.0	25.0
40°-50°	64.0	11.6	11.6
50°-60°	6.6	1.2	1.2
60°-70°	2.8	0.5	0.5
70°-80°	0.4	0.1	0.1
80°-90°	0.0	0.0	0.0
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°	342.0	61.7	61.8
0°-40°	480.3	86.7	86.9
0°-60°	551.0	99.4	99.6
0°-90°	554.2	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°	554.2	100.0	100.2

CANDELA DISTRIBUTION:

	0°	Flux
0°	856	
5°	768	68
15°	459	130
25°	312	144
35°	224	138
45°	78	64
55°	6	7
65°	3	3
75°	0	0
85°	0	0
90°	0	



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CANDELA DISTRIBUTION (FULL):

	0°
0°	856
2.5°	832
5°	768
7.5°	686
10°	598
12.5°	520
15°	459
17.5°	415
20°	377
22.5°	342
25°	312
27.5°	284
30°	261
32.5°	242
35°	224
37.5°	204
40°	174
42.5°	130
45°	78
47.5°	37
50°	16
52.5°	9
55°	6
57.5°	5
60°	4
62.5°	4
65°	3
67.5°	2
70°	1
72.5°	1
75°	0
77.5°	0
80°	0
82.5°	0
85°	0
87.5°	0
90°	0

(END OF REPORT)