

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: P20336

Luminaire Tested: **EL405840-TL400SBK**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P20336
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: EL405840-TL400SBK
Description: HALO 4 INCH RECESSED LED DOWNLIGHT WITH SPECULAR BLACK FINISH
REFLECTOR IN TRIM EL405840-TL400SBK
Light Source: (1)SURFACE MOUNT LED
14 WATTS
Ballast/Driver: 120 VOLT ELECTRONIC DRIVER

Summary

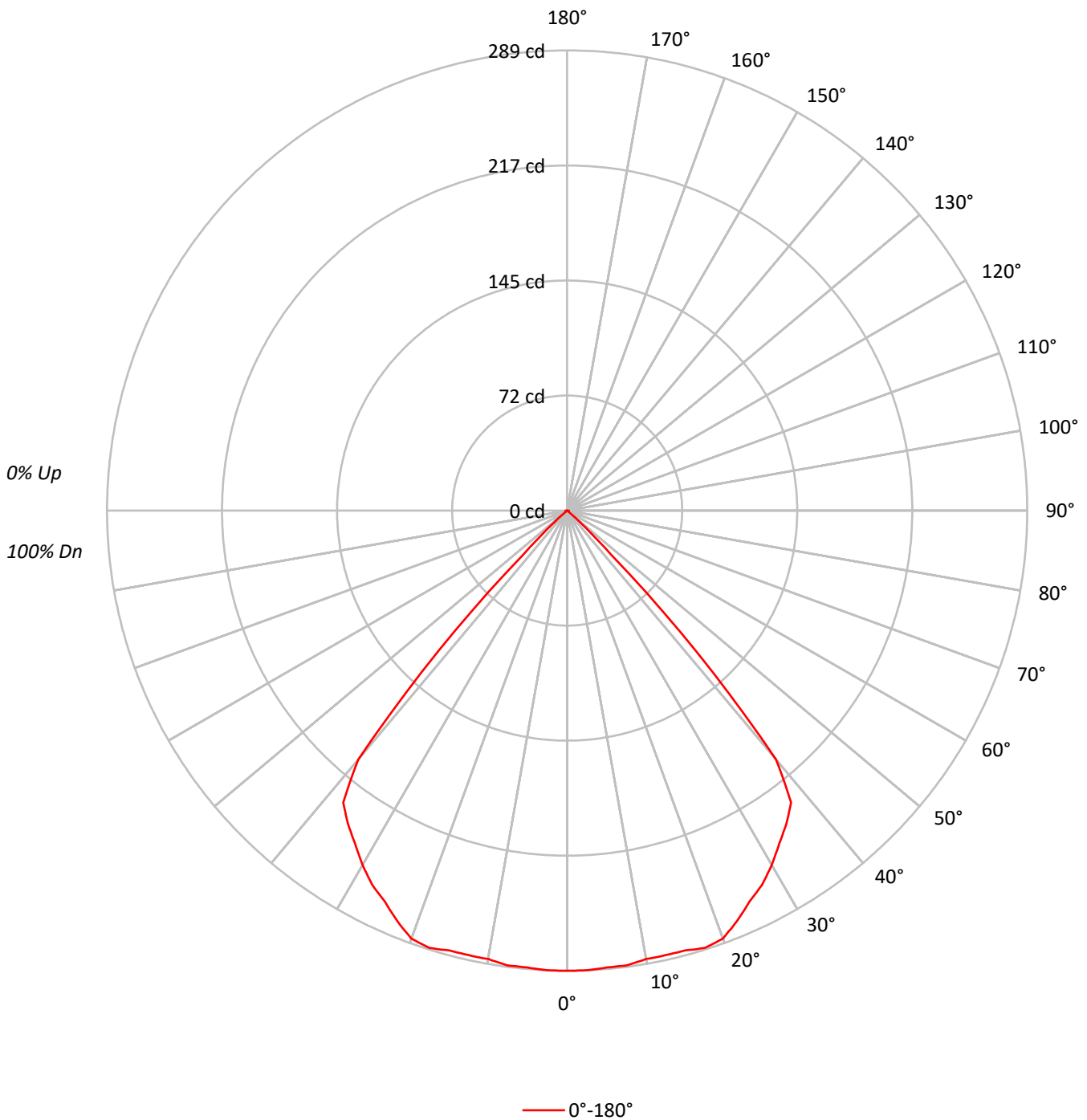
Lumens per Lamp: 436 (1 lamp)
Luminaire Lumens: 437.3 lumens
Efficiency: 100.3%
Efficacy: 31.5 lumens/watt
Spacing Criteria (0/90/45): 1.3 / 1.3 / 1.23
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 13.9
Input Voltage (V): NR
Input Current (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



TEST NUMBER: P20336
CATALOG NUMBER: EL405840-TL400SBK

Luminous Intensity Polar Plot





TEST NUMBER: P20336

CATALOG NUMBER: EL405840-TL400SBK

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	110	107	105	111	108	106	103	104	102	100		100	99	97		97	95	94	92
2	107	101	97	93	105	100	96	92	96	93	90		93	91	88		91	88	86	85
3	101	94	88	84	99	92	87	83	89	85	82		87	83	80		85	82	79	77
4	95	86	80	76	93	85	79	75	83	78	74		81	77	73		79	75	72	71
5	89	80	73	69	87	79	73	68	77	72	68		75	71	67		74	70	66	65
6	84	74	67	62	82	73	67	62	72	66	62		70	65	61		69	64	61	59
7	79	69	62	57	78	68	62	57	67	61	57		65	60	56		64	60	56	54
8	74	64	57	52	73	63	57	52	62	56	52		61	56	52		60	55	52	50
9	70	59	53	48	69	59	53	48	58	52	48		57	52	48		56	51	48	46
10	66	55	49	45	65	55	49	45	54	48	44		53	48	44		53	48	44	43

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	27997
5°	28007
10°	28134
15°	28684
20°	29485
25°	28967
30°	28749
35°	28383
40°	25798
45°	5343
50°	301
55°	169
60°	194
65°	229
70°	283
75°	374
80°	558
85°	1112



TEST NUMBER: P20336

CATALOG NUMBER: EL405840-TL400SBK

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	27.5	6.3	6.3
10°-20°	81.2	18.6	18.6
20°-30°	125.3	28.7	28.7
30°-40°	148.6	34.0	34.1
40°-50°	50.6	11.6	11.6
50°-60°	1.0	0.2	0.2
60°-70°	1.0	0.2	0.2
70°-80°	1.1	0.2	0.2
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°	234.0	53.5	53.7
0°-40°	382.6	87.5	87.8
0°-60°	434.2	99.3	99.6
0°-90°	437.3	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°	437.3	100.0	100.3

CANDELA DISTRIBUTION:

	0°	Flux
0°	289	
5°	288	27
15°	286	81
25°	271	125
35°	240	149
45°	39	51
55°	1	1
65°	1	1
75°	1	1
85°	1	1
90°	0	



TEST NUMBER: P20336

CATALOG NUMBER: EL405840-TL400SBK

CANDELA DISTRIBUTION (FULL):

	0°
0°	289
2.5°	289
5°	288
7.5°	288
10°	286
12.5°	286
15°	286
17.5°	288
20°	286
22.5°	279
25°	271
27.5°	265
30°	257
32.5°	248
35°	240
37.5°	231
40°	204
42.5°	120
45°	39
47.5°	11
50°	2
52.5°	1
55°	1
57.5°	1
60°	1
62.5°	1
65°	1
67.5°	1
70°	1
72.5°	1
75°	1
77.5°	1
80°	1
82.5°	1
85°	1
87.5°	1
90°	0

(END OF REPORT)