

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 COMMERCIAL

Report Number: P434811

Luminaire Tested: **HCMR3R40930ED010MW**

Issue Date: 11/24/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P434811  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2008-933-3)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 11/24/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCMR3R40930ED010MW  
Description: HALO COMMERCIAL 4INCH ADJUSTABLE MULTIPLE, 40 DEG REFLECTOR OPTIC  
Light Source: HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3575.3 lumens  
Efficiency: N/A  
Efficacy: 87.4 lumens/watt  
Spacing Criteria (0/90/45): 0.72 / 0.72 / 0.76  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

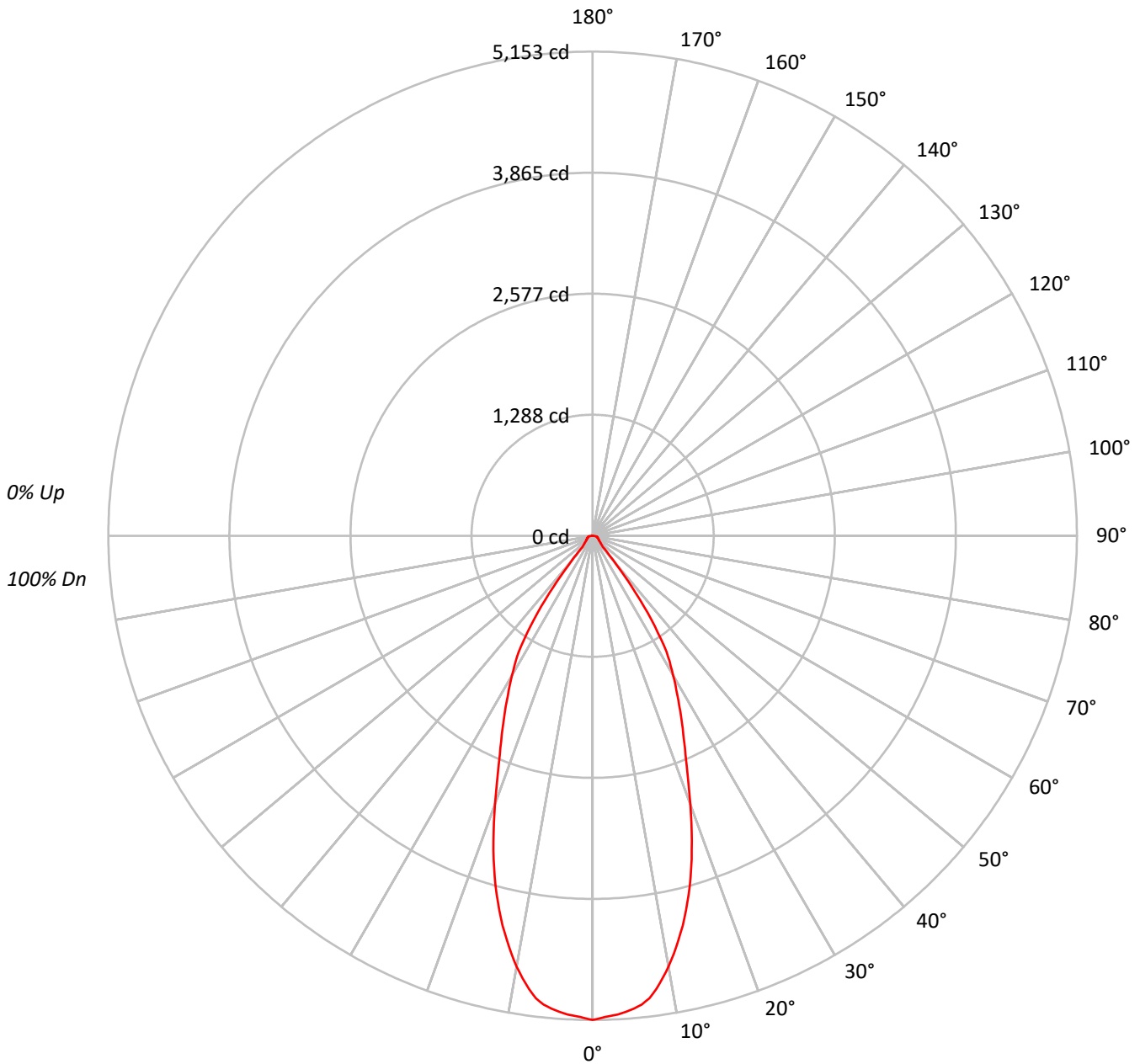
Input Watts (W): 40.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P434811

CATALOG NUMBER: HCMR3R40930ED010MW

### 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	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93
2	107	102	98	95	105	101	97	94	97	94	92	94	92	90	92	90	88	86
3	102	95	90	86	100	94	89	86	91	88	84	89	86	83	87	84	82	80
4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75
5	92	84	78	74	91	83	78	73	81	76	73	80	75	72	78	74	72	70
6	88	79	73	69	86	78	73	69	77	72	68	75	71	68	74	70	67	66
7	84	75	69	65	82	74	68	64	73	68	64	72	67	64	70	66	63	62
8	80	71	65	61	79	70	64	61	69	64	60	68	63	60	67	63	60	58
9	76	67	61	57	75	66	61	57	66	61	57	65	60	57	64	60	57	55
10	73	64	58	54	72	63	58	54	62	57	54	62	57	54	61	57	54	52

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

	0°
0°	2542187
5°	2501332
10°	2331911
15°	2017137
20°	1594032
25°	1233901
30°	976703
35°	657597
40°	215889
45°	91335
50°	78445
55°	71395
60°	69270
65°	74482
70°	78330
75°	97411
80°	117912
85°	18115



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	470.3	13.2
10°-20°	1083.9	30.3
20°-30°	1047.1	29.3
30°-40°	651.5	18.2
40°-50°	119.0	3.3
50°-60°	74.9	2.1
60°-70°	62.1	1.7
70°-80°	53.2	1.5
80°-90°	13.4	0.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2601.3	72.8
0°-40°	3252.8	91.0
0°-60°	3446.7	96.4
0°-90°	3575.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3575.3	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	5153	
5°	5050	470
15°	3949	1084
25°	2267	1047
35°	1092	652
45°	131	119
55°	83	75
65°	64	62
75°	51	53
85°	3	13
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	5152.6
1°	5133.5
2°	5114.3
3°	5101.5
4°	5079.2
5°	5050.5
6°	5015.4
7°	4961.1
8°	4871.7
9°	4766.3
10°	4654.6
11°	4530.1
12°	4396.0
13°	4258.7
14°	4108.7
15°	3949.1
16°	3779.9
17°	3601.1
18°	3415.9
19°	3227.6
20°	3036.0
21°	2854.1
22°	2681.7
23°	2528.4
24°	2394.3
25°	2266.6
26°	2148.5
27°	2033.6
28°	1921.9
29°	1816.5
30°	1714.4
32.5°	1465.3
35°	1091.8
37.5°	680.0
40°	335.2
42.5°	159.6
45°	130.9
47.5°	114.9
50°	102.2
52.5°	89.4
55°	83.0
57.5°	76.6
60°	70.2



TEST NUMBER: P434811

CATALOG NUMBER: HCMR3R40930ED010MW

**CANDELA DISTRIBUTION (continued):**

	0°
67.5°	57.5
70°	54.3
72.5°	54.3
75°	51.1
77.5°	47.9
80°	41.5
82.5°	25.5
85°	3.2
87.5°	0.0
90°	0.0



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— 0°-180°







62.5°		67.0
65°		63.8



(END OF REPORT)