

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: FAIL-SAFE

Report Number: H39084

Luminaire Tested: **HCW-100MH**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: H39084  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: HCW-100MH  
Description: FAILSAFE 12 X 8" WALL MOUNT DOWNLIGHT  
SPECULAR REFLECTOR  
CLEAR GLASS LENS  
Light Source: M100/U/MED 100 WATTS 7800 LUMENS  
ED-17 METAL HALIDE CLEAR  
Ballast/Driver: -

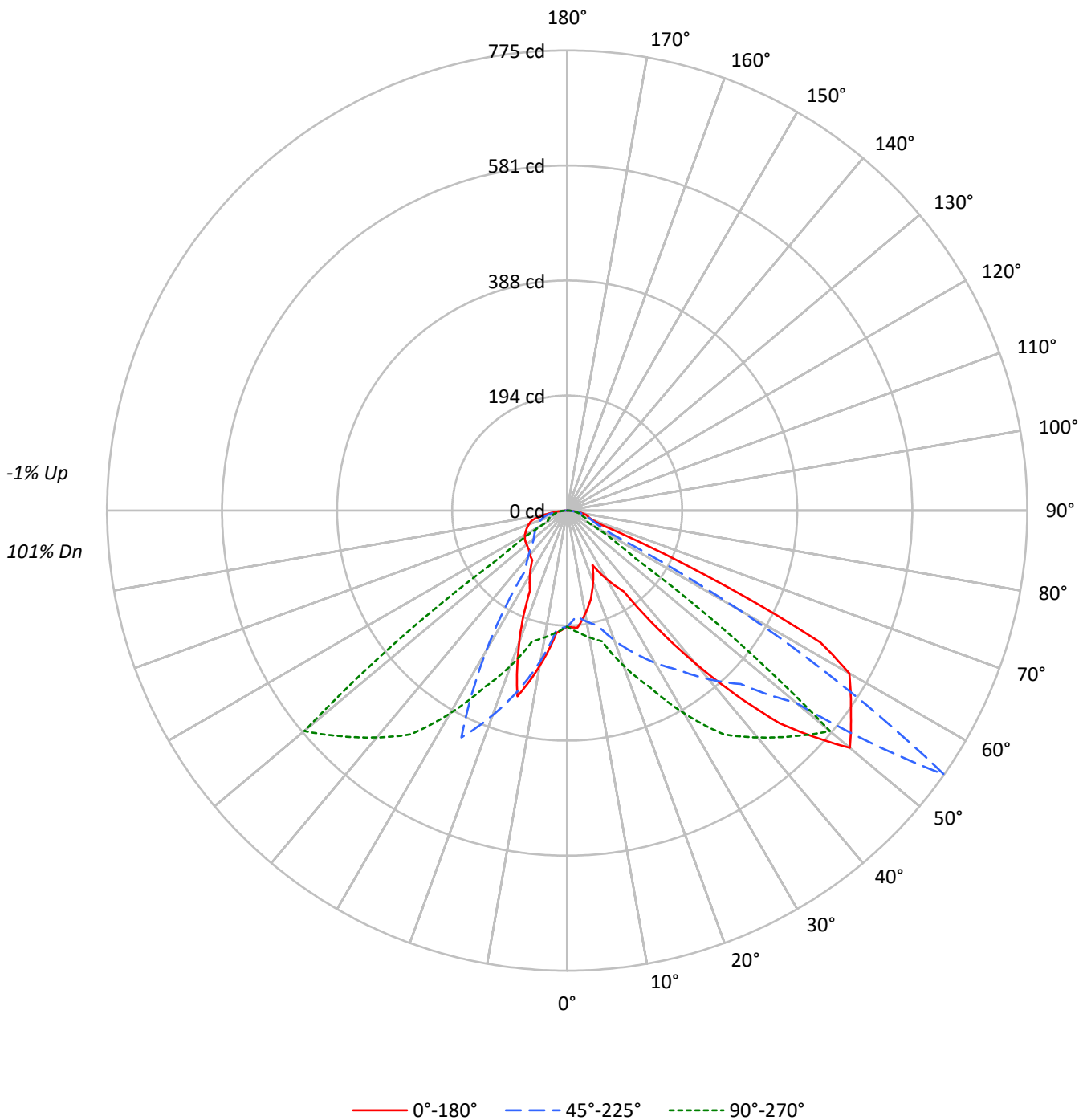
**Summary**

Lumens per Lamp: 7800 (1 lamp)  
Luminaire Lumens: 1134.2 lumens  
Efficiency: 14.5%  
Efficacy: 11.3 lumens/watt  
Spacing Criteria (0/90/45): 2.28 / 2.55 / 2.21  
Luminous Opening: Rectangular (W 0.48' x L: 0.79' x H: 0')  
CIE Type: Direct

Input Watts (W): 100  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	50	30	10	50	30	10	50	30	10	0																			
RCR																																														
0	17	17	17	17	17	17	17	17	16	16	16	16	16	16	16	16	16	15	15	15	15	15	15	15	15	15	15	15																		
1	16	15	15	14	16	15	14	14	14	14	14	14	14	14	13	13	13	13	13	13	13	13	13	13	13	13	12																			
2	15	13	12	11	14	13	12	11	13	12	11	12	11	11	12	11	11	12	11	11	12	11	11	12	11	11	10																			
3	13	12	10	9	13	11	10	9	11	10	9	10	10	9	10	10	9	10	9	9	10	9	9	10	9	9	8																			
4	12	10	9	8	12	10	9	8	10	8	8	9	8	8	9	8	8	9	8	7	9	8	7	9	8	7	7																			
5	11	9	8	7	11	9	7	6	8	7	6	8	7	6	8	7	6	8	7	6	8	7	6	8	7	6	6																			
6	10	8	7	6	10	8	6	6	7	6	5	7	6	5	7	6	5	7	6	5	7	6	5	7	6	5	5																			
7	9	7	6	5	9	7	6	5	7	6	5	6	5	5	6	5	5	6	5	5	6	5	5	6	5	5	4																			
8	8	6	5	4	8	6	5	4	6	5	4	6	5	4	6	5	4	6	5	4	6	5	4	6	5	4	4																			
9	8	6	4	4	8	6	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	3																			
10	7	5	4	3	7	5	4	3	5	4	3	5	4	3	5	4	3	5	4	3	5	4	3	5	4	3	3																			

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

	0°	90°	180°
0°	5552	5552	5552
5°	5648	5864	5895
10°	5074	6253	7650
15°	4523	6703	9519
20°	3854	8395	7132
25°	3173	10264	4645
30°	4377	12914	4109
35°	5745	15951	3548
40°	12456	18487	3596
45°	20333	21577	3681
50°	27450	25516	3930
55°	28867	6884	4286
60°	31162	2424	4655
65°	17369	2337	5091
70°	3594	2340	5702
75°	3937	2479	6570
80°	4168	2681	5640
85°	2703	2964	4201



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	19.5	1.7	0.2	0°	196	196	196	196	196	
10°-20°	68.5	6.0	0.9	5°	198	178	206	201	207	18
20°-30°	128.1	11.3	1.6	15°	154	201	228	312	324	43
30°-40°	189.7	16.7	2.4	25°	101	264	328	422	148	60
40°-50°	280.6	24.7	3.6	35°	166	328	460	122	102	148
50°-60°	281.9	24.9	3.6	45°	506	413	538	83	92	371
60°-70°	124.4	11.0	1.6	55°	583	775	139	67	87	524
70°-80°	38.5	3.4	0.5	65°	259	58	35	54	76	268
80°-90°	11.3	1.0	0.1	75°	36	31	23	39	60	37
90°-100°	0.0	0.0	0.0	85°	8	8	9	10	13	11
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	0
110°-120°	0.0	0.0	0.0	95°	0	0	0	0	0	0
120°-130°	0.0	0.0	0.0	105°	0	0	0	0	0	0
130°-140°	0.0	0.0	0.0	115°	0	0	0	0	0	0
140°-150°	0.0	0.0	0.0	125°	0	0	0	0	0	0
150°-160°	0.0	0.0	0.0	135°	0	0	0	0	0	0
160°-170°	0.0	0.0	0.0	145°	0	0	0	0	0	0
170°-180°	0.0	0.0	0.0	155°	0	0	0	0	0	0
0°-30°	216.1	19.1	2.8	165°	0	0	0	0	0	0
0°-40°	405.8	35.8	5.2	175°	0	0	0	0	0	0
0°-60°	968.4	85.4	12.4	180°	0	0	0	0	0	0
0°-90°	1142.6	100.7	14.6							
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°	1134.2	100.0	14.5							



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	195.6	195.6	195.6	195.6	195.6	195.6	195.6	195.6	195.6	195.6	195.6
5°	198.2	185.4	182.8	179.5	179.9	178.5	181.2	189.0	220.3	211.9	205.8
15°	153.9	145.6	154.3	165.0	182.1	200.9	199.6	204.2	228.0	232.2	228.1
25°	101.3	96.6	112.9	165.4	213.1	263.7	308.8	393.1	348.6	303.5	327.7
35°	165.8	167.5	198.2	226.7	274.8	328.0	291.5	371.8	416.3	454.5	460.3
45°	506.5	487.0	480.1	426.7	363.5	413.3	467.4	541.0	508.2	545.9	537.5
50°	621.6	632.9	753.2	740.1	668.5	503.3	523.0	606.5	568.3	600.1	577.8
55°	583.3	582.2	596.5	592.9	857.7	775.1	563.3	542.6	245.6	168.8	139.1
60°	548.9	573.3	587.4	568.9	575.8	338.9	178.4	99.0	78.4	62.4	42.7
62.5°	481.0	568.0	571.7	556.1	484.9	81.1	81.3	82.7	70.9	53.5	36.1
65°	258.6	399.7	522.8	532.7	177.3	57.5	65.8	73.1	64.0	50.3	34.8
67.5°	59.0	82.5	169.5	380.6	50.3	46.6	54.4	71.9	57.9	44.8	32.9
70°	43.3	43.1	45.5	56.0	41.0	41.9	48.3	63.0	48.1	38.5	28.2
72.5°	38.3	38.3	38.9	39.4	35.4	37.1	41.8	54.7	40.3	33.6	25.2
75°	35.9	35.5	35.2	33.3	30.9	31.4	35.2	48.5	32.9	28.9	22.6
77.5°	32.3	32.0	31.5	29.2	26.6	25.8	28.1	35.9	26.1	23.4	19.5
80°	25.5	25.0	24.4	23.2	21.7	21.0	21.1	24.2	20.1	19.0	16.4
82.5°	17.7	17.7	17.1	16.0	15.3	14.8	14.6	16.5	14.4	13.6	12.5
85°	8.3	8.0	8.1	8.0	8.1	7.9	7.9	9.6	9.2	9.1	9.1
87.5°	1.7	1.8	1.9	2.1	2.2	2.2	2.4	3.4	4.2	4.8	5.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	195.6	195.6	195.6	195.6	195.6	195.6	195.6	195.6	195.6	195.6
5°	201.1	197.0	197.2	201.9	200.7	201.1	206.0	207.5	207.2	206.9
15°	229.3	229.1	252.7	286.5	311.6	317.4	326.4	324.9	323.0	323.9
25°	344.9	371.2	377.8	390.7	421.6	411.8	328.8	213.9	169.4	148.3
35°	465.1	467.1	479.2	435.0	122.1	117.8	120.9	108.3	105.1	102.4
45°	547.1	551.6	364.6	84.1	83.2	83.8	86.8	90.3	90.9	91.7
50°	577.5	590.1	119.1	71.3	73.2	79.4	85.0	87.6	88.8	89.0
55°	146.1	303.1	63.8	60.1	67.0	74.6	80.8	85.0	86.2	86.6
60°	38.6	51.6	54.7	52.5	61.0	68.8	75.5	79.8	81.7	82.0
62.5°	31.7	44.5	51.4	49.2	57.9	65.5	72.2	76.7	78.9	79.0
65°	30.5	38.4	46.2	46.1	54.4	62.2	68.7	73.3	75.5	75.8
67.5°	29.1	32.4	40.3	43.9	50.7	58.1	64.7	69.6	72.2	72.5
70°	25.9	29.5	35.6	41.6	47.3	53.9	60.5	65.9	68.5	68.7
72.5°	23.2	26.8	32.7	38.5	43.7	49.0	56.1	61.4	64.5	65.0
75°	21.3	24.2	29.5	34.5	39.3	44.5	50.8	57.0	60.1	59.9
77.5°	18.5	21.3	25.2	29.3	33.9	38.8	42.2	45.9	47.1	46.3
80°	15.9	18.1	20.5	23.5	27.1	28.6	30.0	33.5	34.7	34.5
82.5°	12.0	13.1	14.5	16.5	17.8	18.6	19.8	21.5	21.8	22.4
85°	8.8	8.6	8.7	9.5	10.1	10.6	11.3	12.3	12.9	12.9
87.5°	4.9	4.5	4.2	4.0	4.1	4.7	5.1	5.6	6.0	6.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)