

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: P545771

Luminaire Tested: **FMR-12-2-LD4-2STD-40-UNV-82-88-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P545771
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 6/15/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-12-2-LD4-2STD-40-UNV-82-88-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

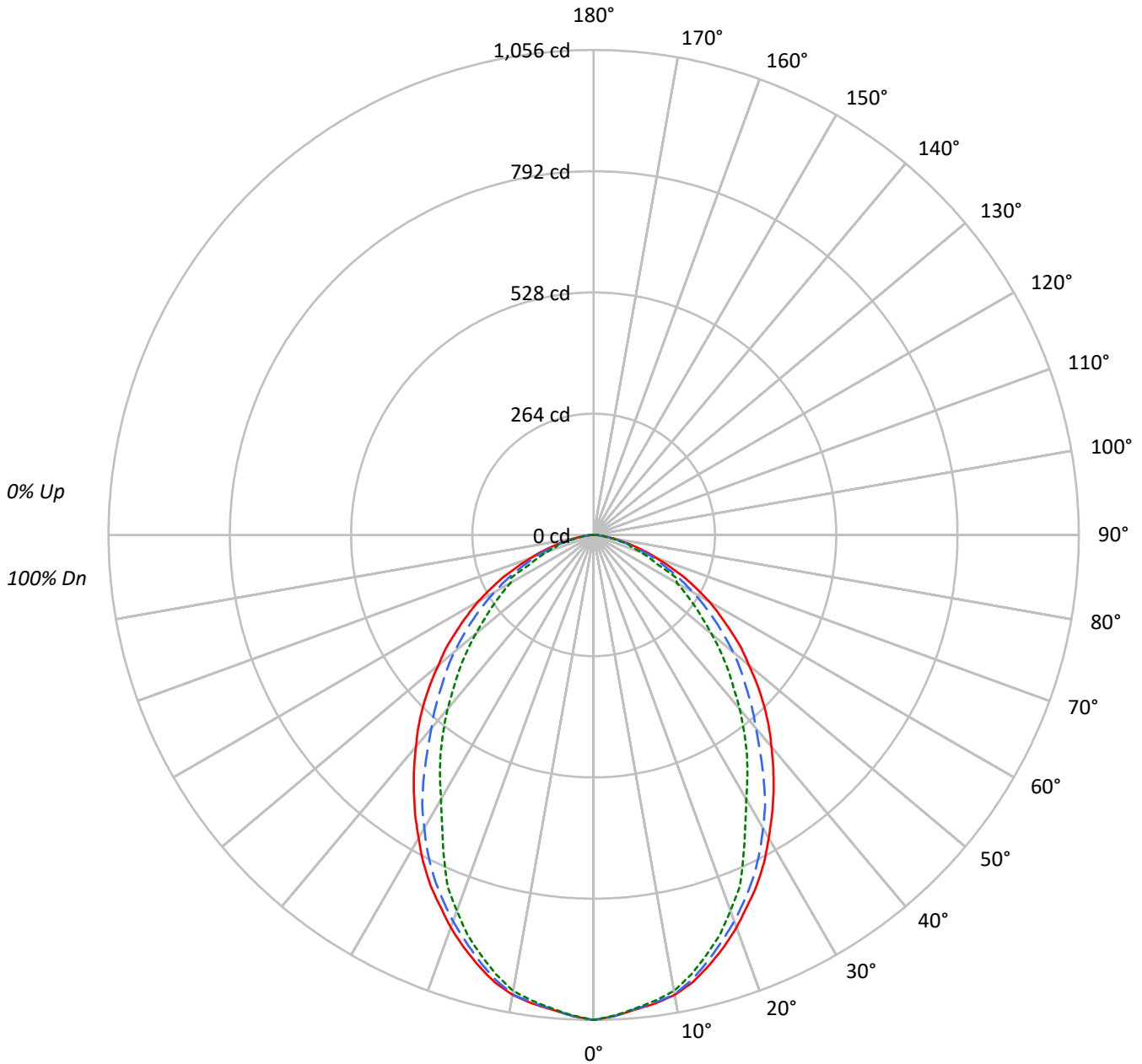
Lumens per Lamp: N/A
Luminaire Lumens: 2073.0 lumens
Efficiency: N/A
Efficacy: 62.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5683	5683	5683
5°	5606	5599	5593
10°	5557	5551	5510
15°	5407	5353	5278
20°	5209	5125	4985
25°	4995	4886	4581
30°	4734	4582	4127
35°	4483	4235	3818
40°	4228	3859	3473
45°	3986	3568	3140
50°	3690	3311	2801
55°	3414	3001	2508
60°	3127	2680	2248
65°	2752	2347	1990
70°	2266	2055	1690
75°	1803	1574	1649
80°	1212	1134	1060
85°	753	902	1056



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.3	4.7
10°-20°	269.8	13.0
20°-30°	373.5	18.0
30°-40°	398.2	19.2
40°-50°	363.3	17.5
50°-60°	284.6	13.7
60°-70°	185.5	8.9
70°-80°	82.2	4.0
80°-90°	17.6	0.9
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°	741.5	35.8
0°-40°	1139.7	55.0
0°-60°	1787.7	86.2
0°-90°	2073.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2073.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1056	1056	1056	1056	1056	
5°	1038	1036	1036	1035	1035	98
15°	970	970	961	951	947	273
25°	841	836	823	794	772	386
35°	682	678	645	596	581	427
45°	524	513	469	430	413	403
55°	364	353	320	282	267	326
65°	216	204	184	188	156	213
75°	87	81	76	72	79	93
85°	12	13	15	16	17	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1056.0	1056.0	1056.0	1056.0	1056.0
2.5°	1048.6	1048.6	1048.6	1047.4	1047.4
5°	1037.6	1036.4	1036.4	1035.2	1035.2
7.5°	1029.1	1027.9	1026.7	1025.4	1023.0
10°	1016.9	1016.9	1015.7	1009.6	1008.3
12.5°	997.4	996.1	991.3	982.7	980.3
15°	970.5	970.5	960.7	951.0	947.3
17.5°	941.2	940.0	927.8	918.0	913.1
20°	909.5	907.0	894.8	878.9	870.4
22.5°	874.1	874.1	859.4	838.7	830.1
25°	841.1	836.2	822.8	793.5	771.5
27.5°	803.3	795.9	781.3	739.8	714.1
30°	761.8	758.1	737.3	683.6	664.1
32.5°	722.7	716.6	694.6	638.5	622.6
35°	682.4	677.5	644.6	595.7	581.1
37.5°	642.1	636.0	594.5	555.4	537.1
40°	601.8	594.5	549.3	513.9	494.4
42.5°	564.0	554.2	510.3	472.4	450.5
45°	523.7	512.7	468.8	429.7	412.6
47.5°	483.4	473.7	433.4	393.1	373.6
50°	440.7	432.1	395.5	355.2	334.5
52.5°	405.3	391.9	356.5	316.2	299.1
55°	363.8	352.8	319.8	282.0	267.3
57.5°	325.9	315.0	284.4	249.0	236.8
60°	290.5	274.7	249.0	218.5	208.8
62.5°	251.5	239.3	217.3	191.7	203.9
65°	216.1	203.9	184.3	188.0	156.3
67.5°	177.0	170.9	153.8	136.7	131.8
70°	144.0	136.7	130.6	112.3	107.4
72.5°	114.8	107.4	98.9	89.1	85.5
75°	86.7	80.6	75.7	72.0	79.3
77.5°	59.8	57.4	53.7	50.1	48.8
80°	39.1	37.8	36.6	35.4	34.2
82.5°	23.2	23.2	23.2	23.2	23.2
85°	12.2	13.4	14.6	15.9	17.1
87.5°	7.3	7.3	8.5	9.8	11.0
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)