

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: P545677

Luminaire Tested: **FMR-12-2-LD4-2LO-40-UNV-82-96-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: P545677
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-LD4-2LO-40-UNV-82-96-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

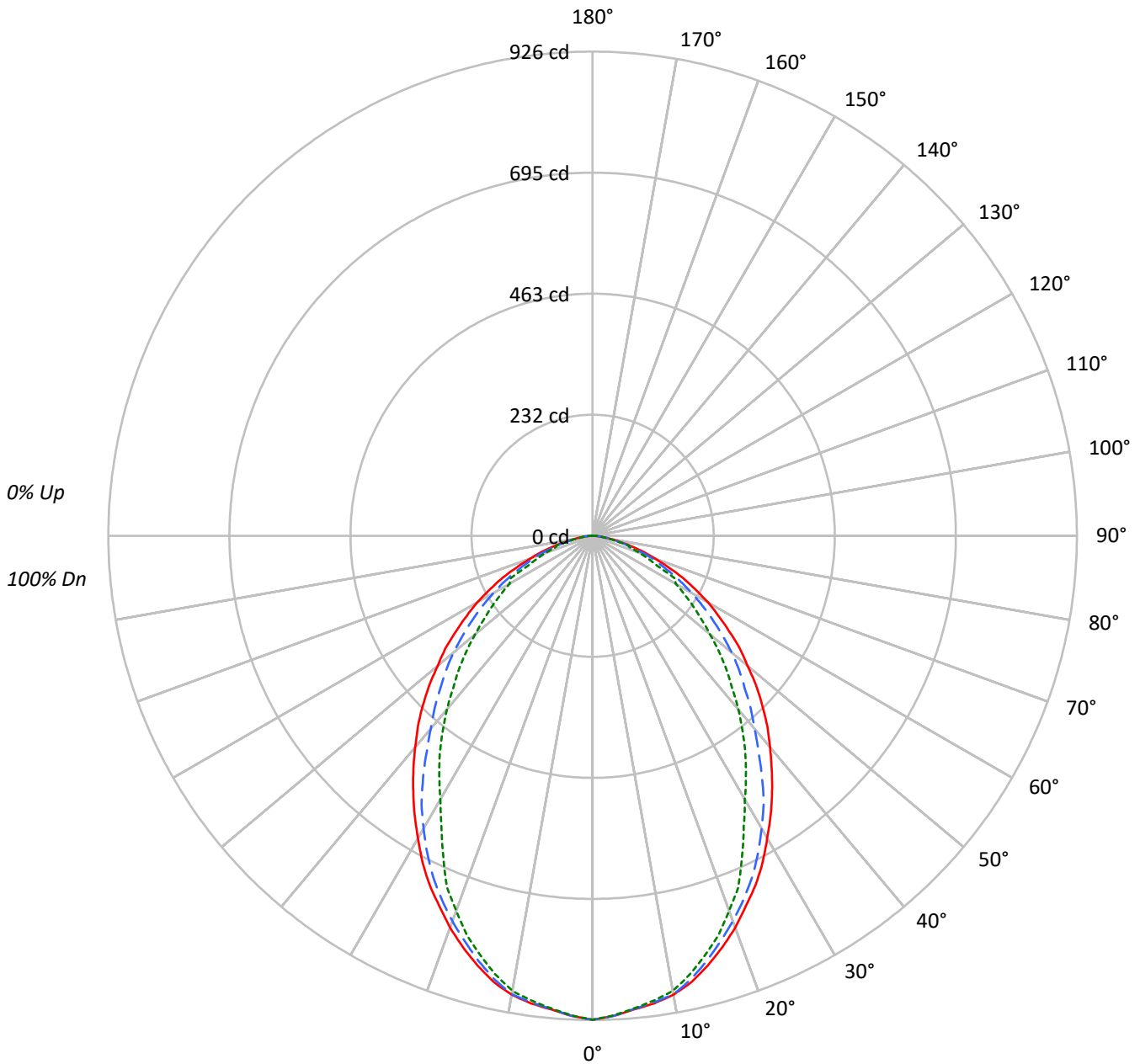
Lumens per Lamp: N/A
Luminaire Lumens: 1817.0 lumens
Efficiency: N/A
Efficacy: 77.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	4982	4982	4982
5°	4914	4908	4902
10°	4871	4865	4830
15°	4740	4692	4626
20°	4566	4492	4369
25°	4378	4283	4016
30°	4149	4016	3617
35°	3930	3712	3346
40°	3706	3383	3045
45°	3494	3127	2753
50°	3234	2903	2455
55°	2992	2630	2198
60°	2742	2350	1970
65°	2412	2058	1745
70°	1987	1802	1482
75°	1580	1379	1447
80°	1060	995	930
85°	661	790	926



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.2	4.7
10°-20°	236.4	13.0
20°-30°	327.3	18.0
30°-40°	349.1	19.2
40°-50°	318.4	17.5
50°-60°	249.5	13.7
60°-70°	162.6	8.9
70°-80°	72.0	4.0
80°-90°	15.5	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°	650.0	35.8
0°-40°	999.0	55.0
0°-60°	1566.9	86.2
0°-90°	1817.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1817.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	926	926	926	926	926	
5°	910	908	908	907	907	86
15°	851	851	842	834	830	239
25°	737	733	721	696	676	338
35°	598	594	565	522	509	374
45°	459	449	411	377	362	354
55°	319	309	280	247	234	286
65°	189	179	162	165	137	187
75°	76	71	66	63	70	81
85°	11	12	13	14	15	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	925.6	925.6	925.6	925.6	925.6
2.5°	919.1	919.1	919.1	918.1	918.1
5°	909.5	908.4	908.4	907.4	907.4
7.5°	902.0	900.9	899.9	898.8	896.7
10°	891.3	891.3	890.2	884.9	883.8
12.5°	874.2	873.1	868.8	861.4	859.2
15°	850.7	850.7	842.1	833.5	830.3
17.5°	825.0	823.9	813.2	804.6	800.4
20°	797.2	795.0	784.3	770.4	762.9
22.5°	766.1	766.1	753.3	735.1	727.6
25°	737.2	733.0	721.2	695.5	676.2
27.5°	704.1	697.6	684.8	648.4	626.0
30°	667.7	664.5	646.3	599.2	582.1
32.5°	633.4	628.1	608.8	559.6	545.7
35°	598.1	593.9	565.0	522.2	509.3
37.5°	562.8	557.5	521.1	486.9	470.8
40°	527.5	521.1	481.5	450.5	433.4
42.5°	494.3	485.8	447.3	414.1	394.8
45°	459.0	449.4	410.9	376.6	361.7
47.5°	423.7	415.2	379.9	344.5	327.4
50°	386.3	378.8	346.7	311.4	293.2
52.5°	355.2	343.5	312.4	277.1	262.2
55°	318.9	309.2	280.3	247.2	234.3
57.5°	285.7	276.1	249.3	218.3	207.6
60°	254.7	240.8	218.3	191.5	183.0
62.5°	220.4	209.7	190.5	168.0	178.7
65°	189.4	178.7	161.6	164.8	137.0
67.5°	155.2	149.8	134.8	119.8	115.6
70°	126.3	119.8	114.5	98.4	94.2
72.5°	100.6	94.2	86.7	78.1	74.9
75°	76.0	70.6	66.3	63.1	69.6
77.5°	52.4	50.3	47.1	43.9	42.8
80°	34.2	33.2	32.1	31.0	30.0
82.5°	20.3	20.3	20.3	20.3	20.3
85°	10.7	11.8	12.8	13.9	15.0
87.5°	6.4	6.4	7.5	8.6	9.6
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)