

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: P545635

Luminaire Tested: **FMR-12-2-LD4-2LO-35-UNV-81-88-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: P545635
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-35-UNV-81-88-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

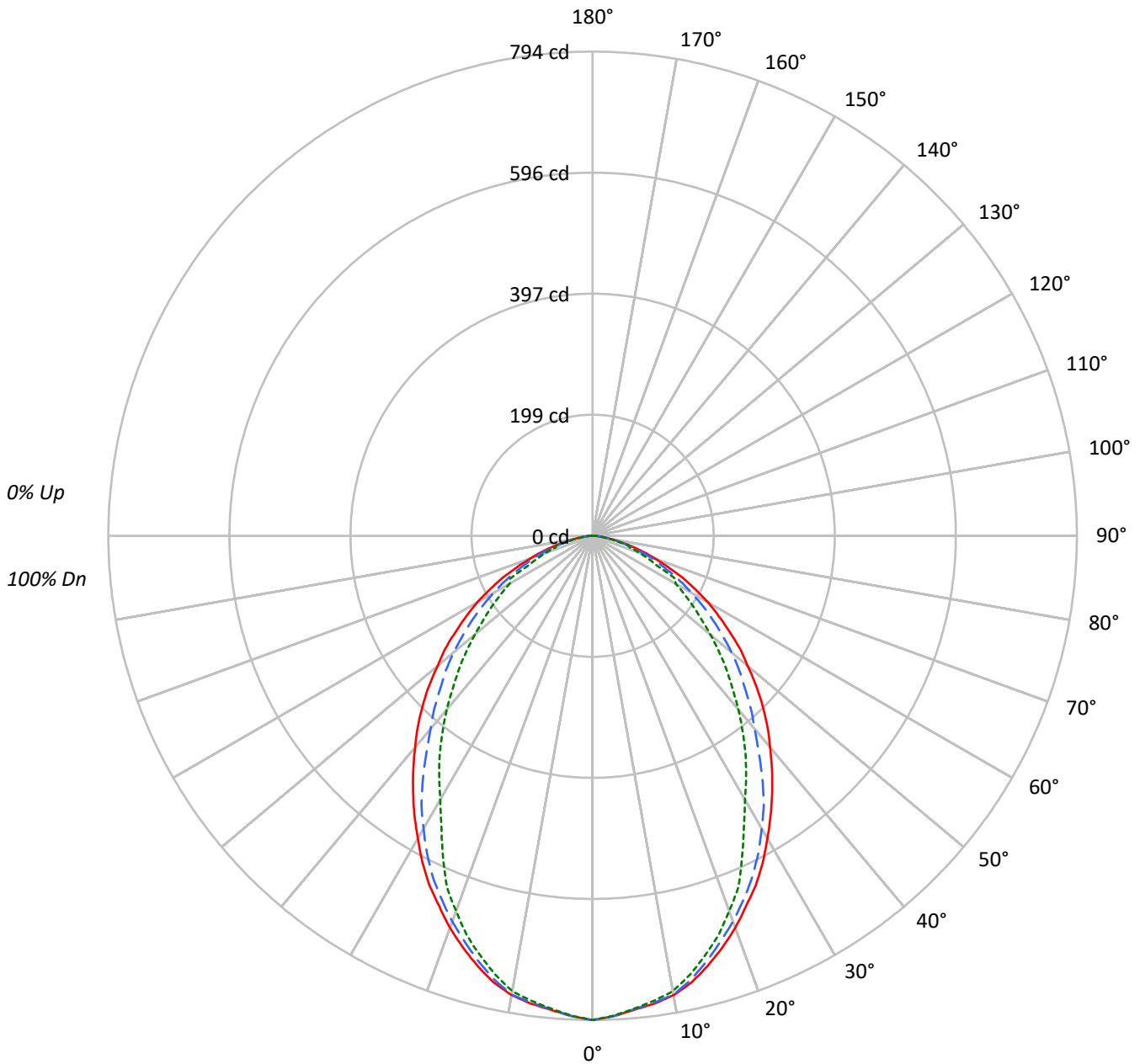
Lumens per Lamp: N/A
Luminaire Lumens: 1559.0 lumens
Efficiency: N/A
Efficacy: 66.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	4274	4274	4274
5°	4216	4211	4206
10°	4180	4174	4144
15°	4067	4026	3969
20°	3918	3854	3749
25°	3757	3675	3445
30°	3560	3446	3104
35°	3372	3185	2871
40°	3180	2902	2612
45°	2998	2683	2362
50°	2775	2491	2107
55°	2567	2257	1887
60°	2352	2016	1690
65°	2069	1765	1496
70°	1704	1545	1271
75°	1356	1183	1241
80°	911	852	797
85°	568	679	797



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.9	4.7
10°-20°	202.9	13.0
20°-30°	280.9	18.0
30°-40°	299.5	19.2
40°-50°	273.2	17.5
50°-60°	214.1	13.7
60°-70°	139.5	8.9
70°-80°	61.8	4.0
80°-90°	13.3	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°	557.7	35.8
0°-40°	857.1	55.0
0°-60°	1344.4	86.2
0°-90°	1559.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1559.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	794	794	794	794	794	
5°	780	779	779	778	778	74
15°	730	730	722	715	712	205
25°	633	629	619	597	580	290
35°	513	510	485	448	437	321
45°	394	386	352	323	310	303
55°	274	265	240	212	201	245
65°	162	153	139	141	118	160
75°	65	61	57	54	60	70
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	794.1	794.1	794.1	794.1	794.1
2.5°	788.6	788.6	788.6	787.7	787.7
5°	780.4	779.4	779.4	778.5	778.5
7.5°	773.9	773.0	772.1	771.2	769.3
10°	764.8	764.8	763.8	759.2	758.3
12.5°	750.1	749.1	745.5	739.0	737.2
15°	729.9	729.9	722.5	715.2	712.4
17.5°	707.8	706.9	697.7	690.4	686.7
20°	684.0	682.1	672.9	661.0	654.6
22.5°	657.3	657.3	646.3	630.7	624.3
25°	632.6	628.9	618.8	596.7	580.2
27.5°	604.1	598.6	587.6	556.4	537.1
30°	572.9	570.1	554.5	514.1	499.4
32.5°	543.5	538.9	522.4	480.2	468.2
35°	513.2	509.5	484.7	448.0	437.0
37.5°	482.9	478.3	447.1	417.7	404.0
40°	452.6	447.1	413.1	386.5	371.8
42.5°	424.2	416.8	383.8	355.3	338.8
45°	393.9	385.6	352.5	323.2	310.3
47.5°	363.6	356.2	325.9	295.6	280.9
50°	331.4	325.0	297.5	267.2	251.6
52.5°	304.8	294.7	268.1	237.8	224.9
55°	273.6	265.3	240.5	212.1	201.1
57.5°	245.1	236.9	213.9	187.3	178.1
60°	218.5	206.6	187.3	164.3	157.0
62.5°	189.1	179.9	163.4	144.1	153.3
65°	162.5	153.3	138.6	141.4	117.5
67.5°	133.1	128.5	115.7	102.8	99.2
70°	108.3	102.8	98.2	84.5	80.8
72.5°	86.3	80.8	74.4	67.0	64.3
75°	65.2	60.6	56.9	54.2	59.7
77.5°	45.0	43.1	40.4	37.6	36.7
80°	29.4	28.5	27.5	26.6	25.7
82.5°	17.4	17.4	17.4	17.4	17.4
85°	9.2	10.1	11.0	11.9	12.9
87.5°	5.5	5.5	6.4	7.3	8.3
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)