

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: P545482

Luminaire Tested: **FMR-12-2-LD4-1STD-40-UNV-82-87-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: P545482
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-LD4-1STD-40-UNV-82-87-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

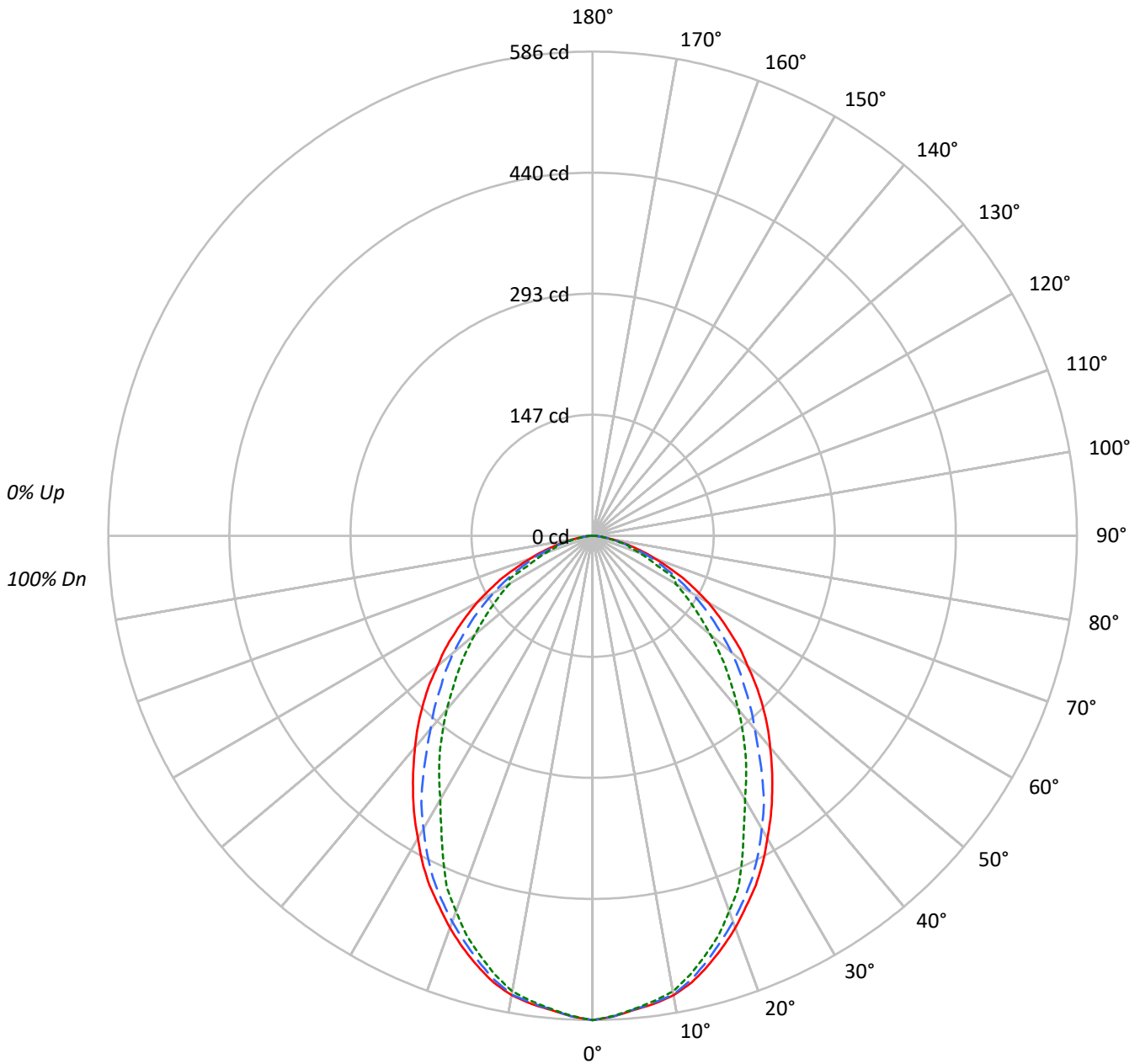
Lumens per Lamp: N/A
Luminaire Lumens: 1151.0 lumens
Efficiency: N/A
Efficacy: 69.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
Input Voltage (V): NR
Input Current (A_{in}): 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°	3155	3155	3155
5°	3112	3109	3105
10°	3086	3082	3060
15°	3003	2972	2931
20°	2892	2845	2768
25°	2773	2713	2544
30°	2629	2544	2291
35°	2489	2351	2120
40°	2348	2143	1929
45°	2213	1981	1744
50°	2049	1839	1555
55°	1895	1666	1392
60°	1736	1489	1248
65°	1528	1303	1105
70°	1259	1141	938
75°	1000	873	917
80°	673	629	589
85°	420	500	587



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.6	4.7
10°-20°	149.8	13.0
20°-30°	207.4	18.0
30°-40°	221.1	19.2
40°-50°	201.7	17.5
50°-60°	158.0	13.7
60°-70°	103.0	8.9
70°-80°	45.6	4.0
80°-90°	9.8	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°	411.7	35.8
0°-40°	632.8	55.0
0°-60°	992.6	86.2
0°-90°	1151.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1151.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	586	586	586	586	586	
5°	576	576	576	575	575	55
15°	539	539	533	528	526	151
25°	467	464	457	441	428	214
35°	379	376	358	331	323	237
45°	291	285	260	239	229	224
55°	202	196	178	157	148	181
65°	120	113	102	104	87	118
75°	48	45	42	40	44	52
85°	7	8	8	9	10	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	586.3	586.3	586.3	586.3	586.3
2.5°	582.2	582.2	582.2	581.6	581.6
5°	576.1	575.5	575.5	574.8	574.8
7.5°	571.4	570.7	570.0	569.4	568.0
10°	564.6	564.6	563.9	560.5	559.9
12.5°	553.8	553.1	550.4	545.6	544.3
15°	538.9	538.9	533.4	528.0	526.0
17.5°	522.6	521.9	515.1	509.7	507.0
20°	505.0	503.6	496.8	488.0	483.3
22.5°	485.3	485.3	477.2	465.7	460.9
25°	467.0	464.3	456.8	440.6	428.4
27.5°	446.0	441.9	433.8	410.8	396.5
30°	423.0	420.9	409.4	379.6	368.7
32.5°	401.3	397.9	385.7	354.5	345.7
35°	378.9	376.2	357.9	330.8	322.6
37.5°	356.5	353.1	330.1	308.4	298.2
40°	334.2	330.1	305.0	285.4	274.5
42.5°	313.1	307.7	283.3	262.3	250.1
45°	290.8	284.7	260.3	238.6	229.1
47.5°	268.4	263.0	240.6	218.3	207.4
50°	244.7	239.9	219.6	197.2	185.7
52.5°	225.0	217.6	197.9	175.6	166.1
55°	202.0	195.9	177.6	156.6	148.4
57.5°	181.0	174.9	157.9	138.3	131.5
60°	161.3	152.5	138.3	121.3	115.9
62.5°	139.6	132.9	120.6	106.4	113.2
65°	120.0	113.2	102.3	104.4	86.8
67.5°	98.3	94.9	85.4	75.9	73.2
70°	80.0	75.9	72.5	62.4	59.6
72.5°	63.7	59.6	54.9	49.5	47.4
75°	48.1	44.7	42.0	40.0	44.1
77.5°	33.2	31.9	29.8	27.8	27.1
80°	21.7	21.0	20.3	19.7	19.0
82.5°	12.9	12.9	12.9	12.9	12.9
85°	6.8	7.5	8.1	8.8	9.5
87.5°	4.1	4.1	4.7	5.4	6.1
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)