

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: P546711

Luminaire Tested: **FMR-24-4-LD4-2HI-40-UNV-80-84-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: P546711
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-24-4-LD4-2HI-40-UNV-80-84-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

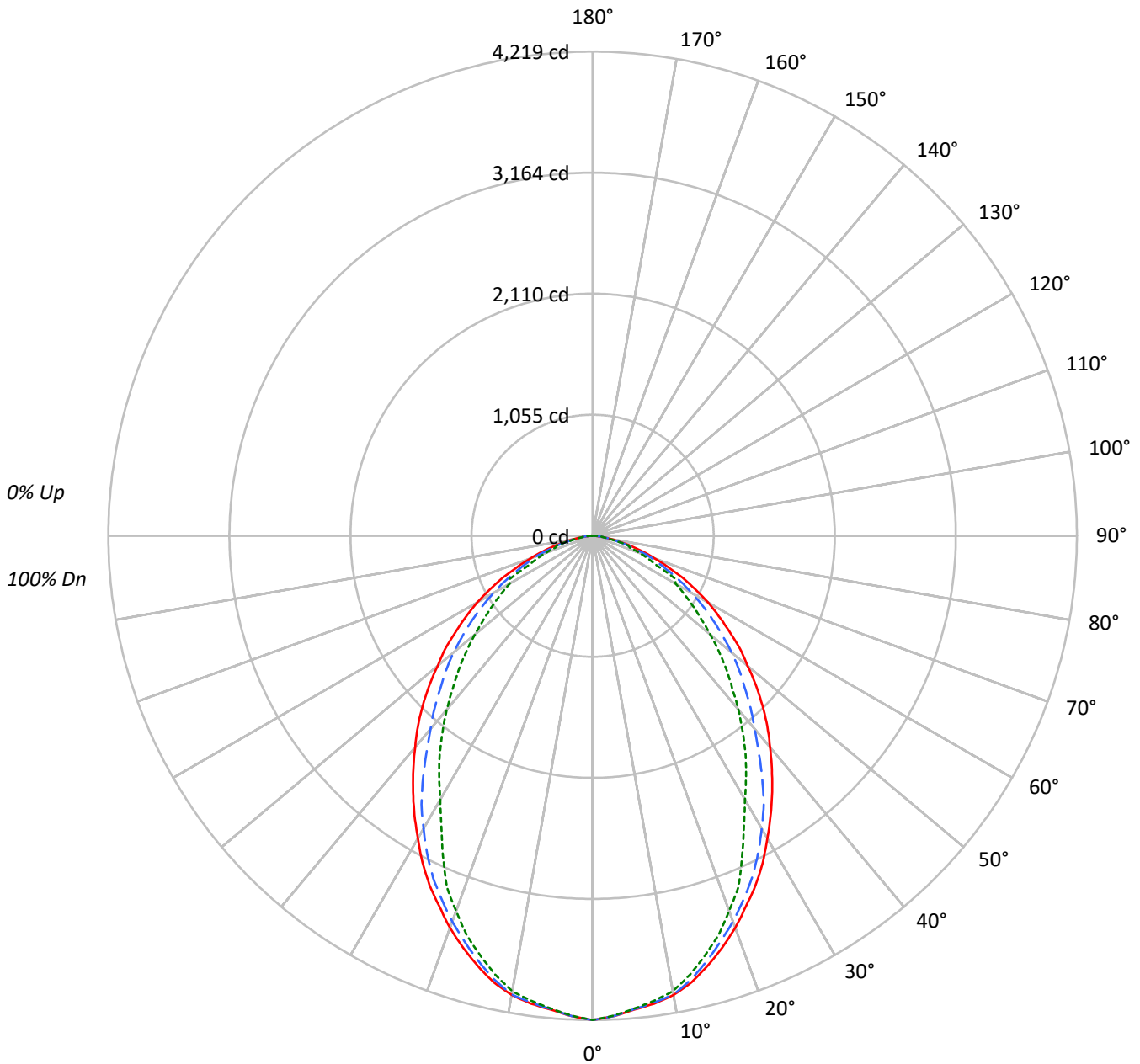
Lumens per Lamp: N/A
Luminaire Lumens: 8283.0 lumens
Efficiency: N/A
Efficacy: 95.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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				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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5677	5677	5677
5°	5600	5593	5587
10°	5551	5545	5505
15°	5402	5347	5272
20°	5203	5119	4980
25°	4989	4881	4577
30°	4729	4577	4123
35°	4479	4230	3814
40°	4224	3855	3470
45°	3982	3564	3137
50°	3686	3308	2798
55°	3410	2998	2506
60°	3124	2678	2245
65°	2749	2345	1988
70°	2264	2053	1688
75°	1800	1572	1648
80°	1210	1134	1058
85°	753	903	1054



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	392.8	4.7
10°-20°	1077.9	13.0
20°-30°	1492.3	18.0
30°-40°	1591.2	19.2
40°-50°	1451.6	17.5
50°-60°	1137.2	13.7
60°-70°	741.2	8.9
70°-80°	328.4	4.0
80°-90°	70.5	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°	2962.9	35.8
0°-40°	4554.1	55.0
0°-60°	7143.0	86.2
0°-90°	8283.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8283.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4219	4219	4219	4219	4219	
5°	4146	4141	4141	4136	4136	394
15°	3878	3878	3839	3800	3785	1090
25°	3361	3341	3288	3170	3083	1543
35°	2727	2707	2575	2380	2322	1705
45°	2093	2049	1873	1717	1649	1612
55°	1454	1410	1278	1127	1068	1304
65°	863	815	736	751	624	851
75°	346	322	302	288	317	371
85°	49	54	58	63	68	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4219.2	4219.2	4219.2	4219.2	4219.2
2.5°	4190.0	4190.0	4190.0	4185.1	4185.1
5°	4146.1	4141.2	4141.2	4136.3	4136.3
7.5°	4111.9	4107.1	4102.2	4097.3	4087.6
10°	4063.2	4063.2	4058.3	4033.9	4029.0
12.5°	3985.1	3980.2	3960.7	3926.6	3916.8
15°	3877.8	3877.8	3838.8	3799.8	3785.1
17.5°	3760.7	3755.9	3707.1	3668.1	3648.6
20°	3633.9	3624.2	3575.4	3512.0	3477.8
22.5°	3492.5	3492.5	3433.9	3351.0	3316.9
25°	3360.8	3341.3	3287.6	3170.5	3082.7
27.5°	3209.6	3180.3	3121.8	2955.9	2853.5
30°	3043.7	3029.1	2946.2	2731.5	2653.5
32.5°	2887.6	2863.2	2775.4	2551.1	2487.7
35°	2726.7	2707.1	2575.4	2380.3	2321.8
37.5°	2565.7	2541.3	2375.5	2219.4	2146.2
40°	2404.7	2375.5	2195.0	2053.5	1975.5
42.5°	2253.5	2214.5	2038.9	1887.7	1799.9
45°	2092.6	2048.7	1873.1	1717.0	1648.7
47.5°	1931.6	1892.6	1731.6	1570.6	1492.6
50°	1760.9	1726.7	1580.4	1419.4	1336.5
52.5°	1619.4	1565.8	1424.3	1263.3	1195.0
55°	1453.6	1409.7	1278.0	1126.8	1068.2
57.5°	1302.4	1258.5	1136.5	995.1	946.3
60°	1160.9	1097.5	995.1	873.1	834.1
62.5°	1004.8	956.0	868.2	765.8	814.6
65°	863.4	814.6	736.5	751.2	624.4
67.5°	707.3	682.9	614.6	546.3	526.8
70°	575.6	546.3	521.9	448.8	429.2
72.5°	458.5	429.2	395.1	356.1	341.4
75°	346.3	321.9	302.4	287.8	317.1
77.5°	239.0	229.3	214.6	200.0	195.1
80°	156.1	151.2	146.3	141.5	136.6
82.5°	92.7	92.7	92.7	92.7	92.7
85°	48.8	53.7	58.5	63.4	68.3
87.5°	29.3	29.3	34.1	39.0	43.9
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)