

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: P546205

Luminaire Tested: **FMR-12-4-LD4-2LO-35-UNV-80-96-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: P546205
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-12-4-LD4-2LO-35-UNV-80-96-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

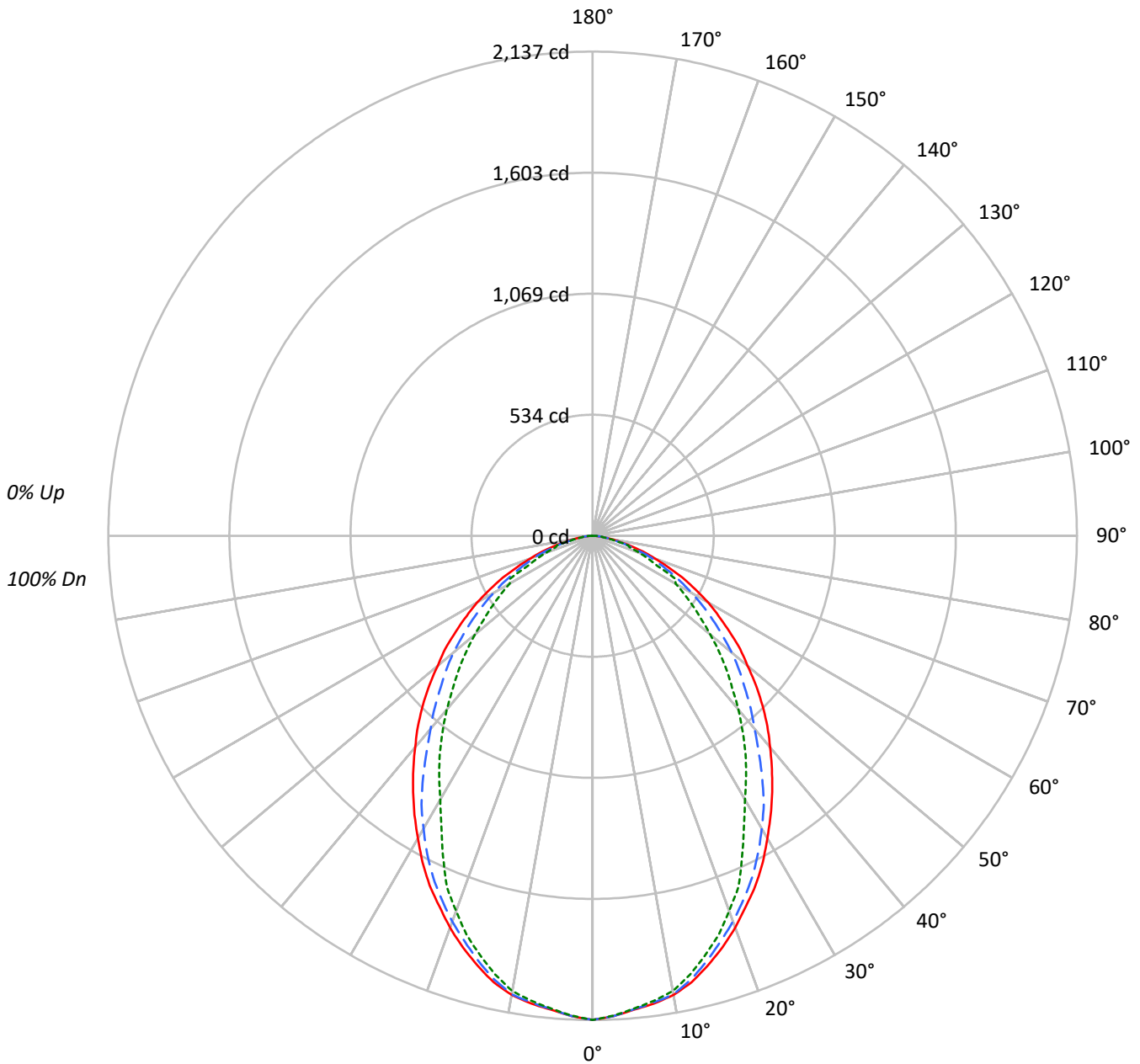
Lumens per Lamp: N/A
Luminaire Lumens: 4195.0 lumens
Efficiency: N/A
Efficacy: 89.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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				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°	5750	5750	5750
5°	5672	5666	5659
10°	5623	5616	5576
15°	5472	5416	5341
20°	5270	5186	5044
25°	5054	4944	4636
30°	4790	4636	4176
35°	4536	4285	3863
40°	4278	3905	3515
45°	4033	3610	3178
50°	3733	3351	2834
55°	3454	3036	2538
60°	3164	2713	2273
65°	2784	2375	2013
70°	2293	2079	1710
75°	1824	1593	1670
80°	1226	1148	1072
85°	763	914	1068



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	198.9	4.7
10°-20°	545.9	13.0
20°-30°	755.8	18.0
30°-40°	805.9	19.2
40°-50°	735.2	17.5
50°-60°	576.0	13.7
60°-70°	375.4	8.9
70°-80°	166.3	4.0
80°-90°	35.7	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°	1500.6	35.8
0°-40°	2306.5	55.0
0°-60°	3617.6	86.2
0°-90°	4195.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4195.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2137	2137	2137	2137	2137	
5°	2100	2097	2097	2095	2095	199
15°	1964	1964	1944	1924	1917	552
25°	1702	1692	1665	1606	1561	781
35°	1381	1371	1304	1206	1176	863
45°	1060	1038	949	870	835	816
55°	736	714	647	571	541	660
65°	437	413	373	380	316	431
75°	175	163	153	146	161	188
85°	25	27	30	32	35	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2136.9	2136.9	2136.9	2136.9	2136.9
2.5°	2122.1	2122.1	2122.1	2119.6	2119.6
5°	2099.8	2097.4	2097.4	2094.9	2094.9
7.5°	2082.5	2080.1	2077.6	2075.1	2070.2
10°	2057.8	2057.8	2055.4	2043.0	2040.5
12.5°	2018.3	2015.8	2005.9	1988.7	1983.7
15°	1964.0	1964.0	1944.2	1924.4	1917.0
17.5°	1904.7	1902.2	1877.5	1857.7	1847.8
20°	1840.4	1835.5	1810.8	1778.7	1761.4
22.5°	1768.8	1768.8	1739.1	1697.1	1679.9
25°	1702.1	1692.2	1665.0	1605.7	1561.3
27.5°	1625.5	1610.7	1581.0	1497.0	1445.2
30°	1541.5	1534.1	1492.1	1383.4	1343.9
32.5°	1462.5	1450.1	1405.6	1292.0	1259.9
35°	1380.9	1371.1	1304.4	1205.5	1175.9
37.5°	1299.4	1287.1	1203.1	1124.0	1087.0
40°	1217.9	1203.1	1111.7	1040.0	1000.5
42.5°	1141.3	1121.6	1032.6	956.0	911.6
45°	1059.8	1037.6	948.6	869.6	835.0
47.5°	978.3	958.5	877.0	795.5	755.9
50°	891.8	874.5	800.4	718.9	676.9
52.5°	820.2	793.0	721.4	639.8	605.2
55°	736.2	713.9	647.2	570.7	541.0
57.5°	659.6	637.4	575.6	504.0	479.3
60°	587.9	555.8	504.0	442.2	422.4
62.5°	508.9	484.2	439.7	387.8	412.6
65°	437.3	412.6	373.0	380.4	316.2
67.5°	358.2	345.9	311.3	276.7	266.8
70°	291.5	276.7	264.3	227.3	217.4
72.5°	232.2	217.4	200.1	180.3	172.9
75°	175.4	163.0	153.2	145.8	160.6
77.5°	121.0	116.1	108.7	101.3	98.8
80°	79.1	76.6	74.1	71.6	69.2
82.5°	46.9	46.9	46.9	46.9	46.9
85°	24.7	27.2	29.6	32.1	34.6
87.5°	14.8	14.8	17.3	19.8	22.2
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)