

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: P545590

Luminaire Tested: **FMR-12-2-LD4-2HI-40-UNV-93-97-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: P545590
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-LD4-2HI-40-UNV-93-97-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

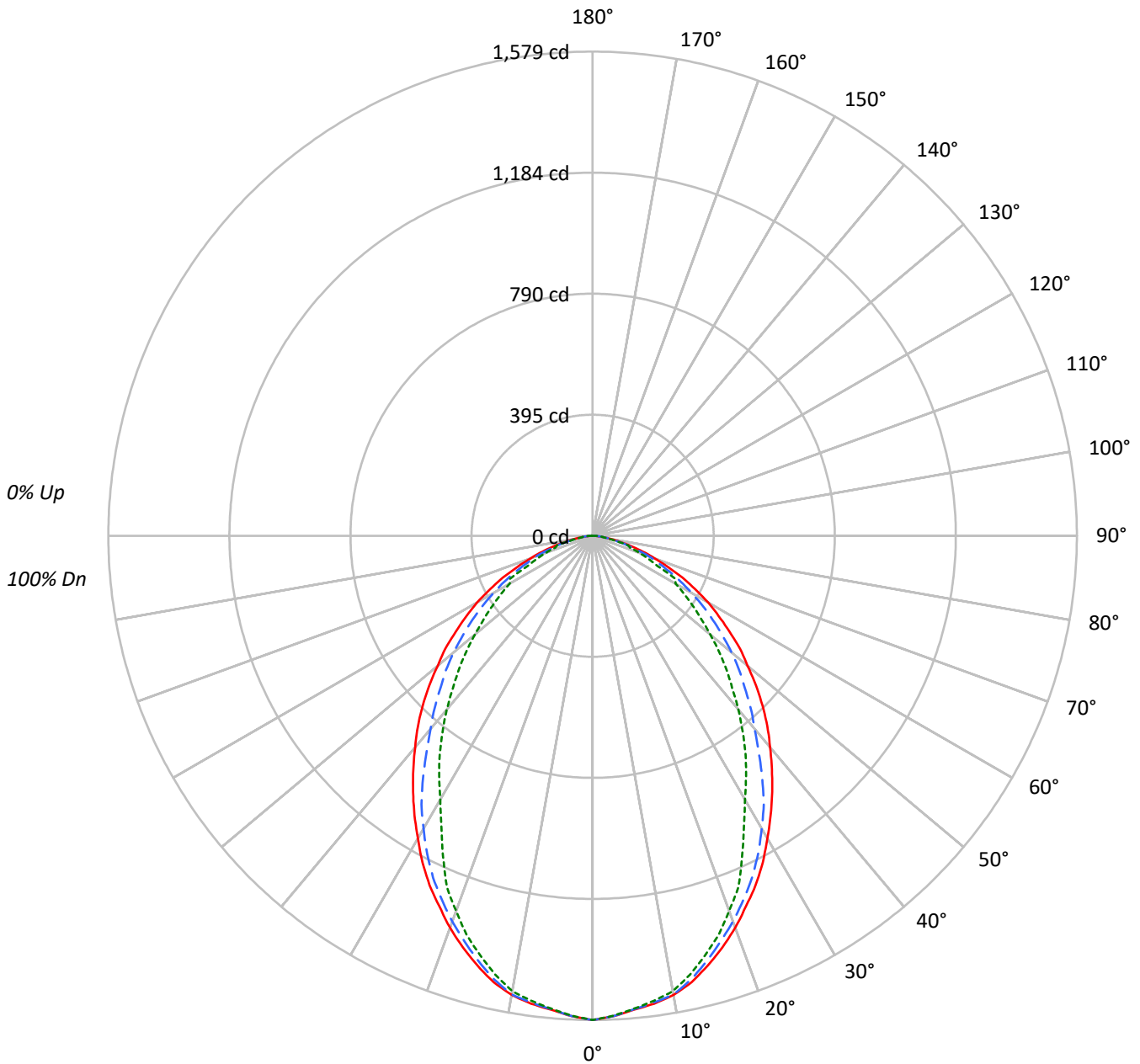
Lumens per Lamp: N/A
Luminaire Lumens: 3100.0 lumens
Efficiency: N/A
Efficacy: 71.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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			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°	8499	8499	8499
5°	8383	8373	8364
10°	8311	8301	8241
15°	8086	8005	7893
20°	7789	7664	7455
25°	7469	7307	6851
30°	7079	6852	6172
35°	6705	6333	5709
40°	6323	5772	5194
45°	5961	5335	4696
50°	5518	4953	4188
55°	5104	4488	3751
60°	4677	4008	3360
65°	4115	3511	2976
70°	3389	3073	2527
75°	2695	2354	2468
80°	1810	1698	1584
85°	1130	1352	1581



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.0	4.7
10°-20°	403.4	13.0
20°-30°	558.5	18.0
30°-40°	595.5	19.2
40°-50°	543.3	17.5
50°-60°	425.6	13.7
60°-70°	277.4	8.9
70°-80°	122.9	4.0
80°-90°	26.4	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°	1108.9	35.8
0°-40°	1704.4	55.0
0°-60°	2673.3	86.2
0°-90°	3100.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3100.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1579	1579	1579	1579	1579	
5°	1552	1550	1550	1548	1548	147
15°	1451	1451	1437	1422	1417	408
25°	1258	1250	1230	1187	1154	577
35°	1020	1013	964	891	869	638
45°	783	767	701	643	617	603
55°	544	528	478	422	400	488
65°	323	305	276	281	234	318
75°	130	120	113	108	119	139
85°	18	20	22	24	26	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1579.1	1579.1	1579.1	1579.1	1579.1
2.5°	1568.1	1568.1	1568.1	1566.3	1566.3
5°	1551.7	1549.9	1549.9	1548.1	1548.1
7.5°	1538.9	1537.1	1535.3	1533.5	1529.8
10°	1520.7	1520.7	1518.9	1509.7	1507.9
12.5°	1491.5	1489.6	1482.3	1469.6	1465.9
15°	1451.3	1451.3	1436.7	1422.1	1416.6
17.5°	1407.5	1405.7	1387.4	1372.8	1365.5
20°	1360.0	1356.4	1338.1	1314.4	1301.6
22.5°	1307.1	1307.1	1285.2	1254.2	1241.4
25°	1257.8	1250.5	1230.4	1186.6	1153.7
27.5°	1201.2	1190.3	1168.4	1106.3	1067.9
30°	1139.1	1133.7	1102.6	1022.3	993.1
32.5°	1080.7	1071.6	1038.7	954.8	931.0
35°	1020.5	1013.2	963.9	890.9	869.0
37.5°	960.2	951.1	889.0	830.6	803.2
40°	900.0	889.0	821.5	768.6	739.3
42.5°	843.4	828.8	763.1	706.5	673.6
45°	783.2	766.7	701.0	642.6	617.0
47.5°	722.9	708.3	648.1	587.8	558.6
50°	659.0	646.2	591.5	531.2	500.2
52.5°	606.1	586.0	533.1	472.8	447.3
55°	544.0	527.6	478.3	421.7	399.8
57.5°	487.4	471.0	425.4	372.4	354.2
60°	434.5	410.7	372.4	326.8	312.2
62.5°	376.1	357.8	324.9	286.6	304.9
65°	323.1	304.9	275.7	281.1	233.7
67.5°	264.7	255.6	230.0	204.5	197.2
70°	215.4	204.5	195.3	168.0	160.6
72.5°	171.6	160.6	147.9	133.3	127.8
75°	129.6	120.5	113.2	107.7	118.7
77.5°	89.5	85.8	80.3	74.8	73.0
80°	58.4	56.6	54.8	52.9	51.1
82.5°	34.7	34.7	34.7	34.7	34.7
85°	18.3	20.1	21.9	23.7	25.6
87.5°	11.0	11.0	12.8	14.6	16.4
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)