

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: P545773

Luminaire Tested: **FMR-12-2-LD4-2STD-40-UNV-82-96-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: P545773
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-LD4-2STD-40-UNV-82-96-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

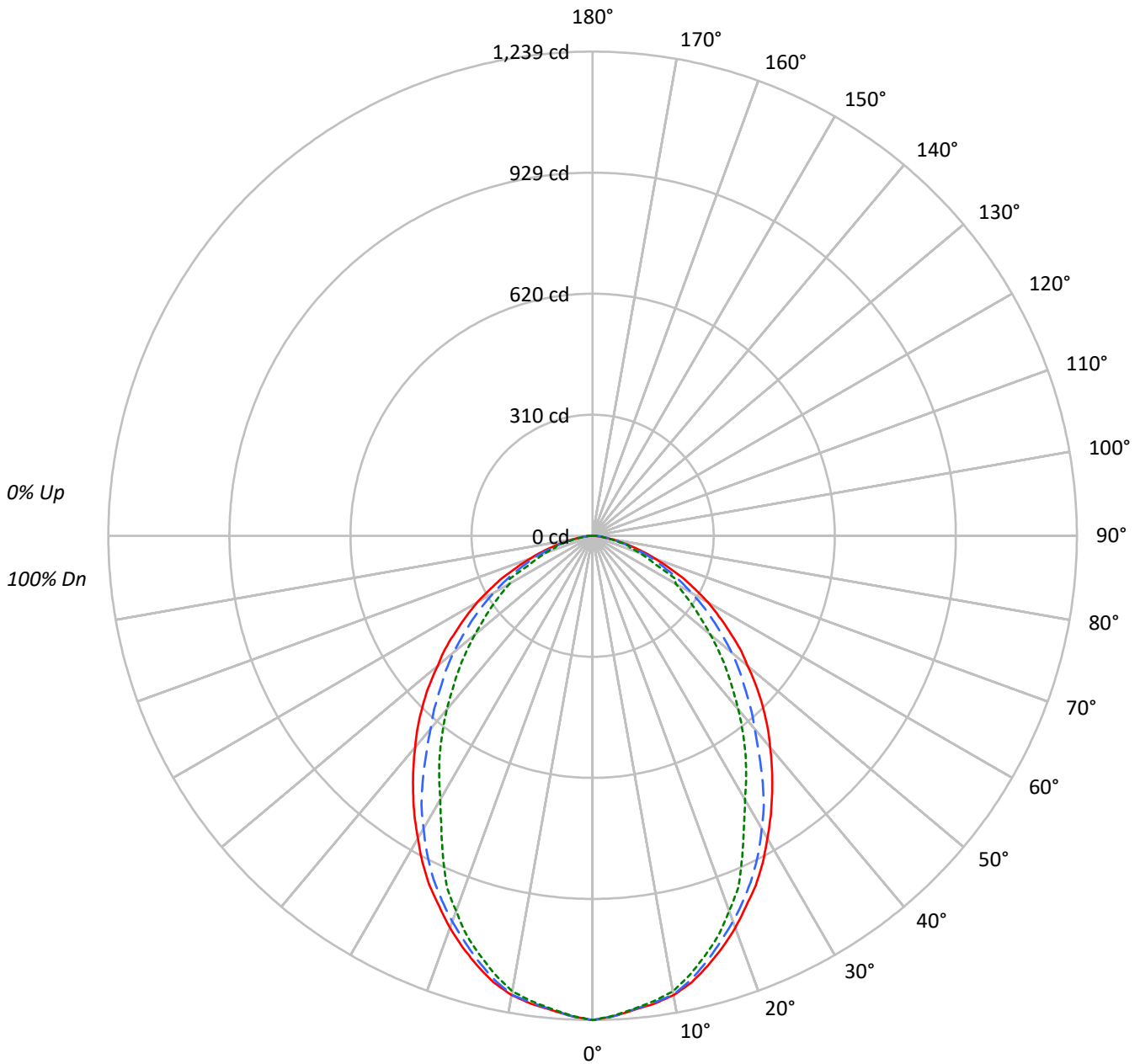
Lumens per Lamp: N/A
Luminaire Lumens: 2433.0 lumens
Efficiency: N/A
Efficacy: 73.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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			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°	6670	6670	6670
5°	6579	6572	6564
10°	6522	6515	6468
15°	6346	6283	6195
20°	6113	6015	5851
25°	5862	5735	5377
30°	5556	5378	4844
35°	5262	4970	4481
40°	4963	4529	4077
45°	4679	4188	3686
50°	4330	3887	3287
55°	4007	3522	2944
60°	3670	3146	2637
65°	3230	2755	2336
70°	2661	2412	1984
75°	2115	1847	1936
80°	1420	1333	1243
85°	883	1062	1241



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.4	4.7
10°-20°	316.6	13.0
20°-30°	438.3	18.0
30°-40°	467.4	19.2
40°-50°	426.4	17.5
50°-60°	334.1	13.7
60°-70°	217.7	8.9
70°-80°	96.5	4.0
80°-90°	20.7	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°	870.3	35.8
0°-40°	1337.7	55.0
0°-60°	2098.1	86.2
0°-90°	2433.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2433.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1239	1239	1239	1239	1239	
5°	1218	1216	1216	1215	1215	116
15°	1139	1139	1128	1116	1112	320
25°	987	981	966	931	906	453
35°	801	795	756	699	682	501
45°	615	602	550	504	484	473
55°	427	414	375	331	314	383
65°	254	239	216	221	183	250
75°	102	95	89	84	93	109
85°	14	16	17	19	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1239.3	1239.3	1239.3	1239.3	1239.3
2.5°	1230.7	1230.7	1230.7	1229.3	1229.3
5°	1217.8	1216.4	1216.4	1215.0	1215.0
7.5°	1207.8	1206.4	1205.0	1203.5	1200.7
10°	1193.5	1193.5	1192.1	1184.9	1183.5
12.5°	1170.6	1169.1	1163.4	1153.4	1150.5
15°	1139.0	1139.0	1127.6	1116.1	1111.8
17.5°	1104.7	1103.2	1088.9	1077.4	1071.7
20°	1067.4	1064.5	1050.2	1031.6	1021.6
22.5°	1025.9	1025.9	1008.7	984.3	974.3
25°	987.2	981.4	965.7	931.3	905.5
27.5°	942.8	934.2	917.0	868.3	838.2
30°	894.0	889.7	865.4	802.3	779.4
32.5°	848.2	841.0	815.2	749.3	730.7
35°	800.9	795.2	756.5	699.2	682.0
37.5°	753.6	746.5	697.8	651.9	630.4
40°	706.4	697.8	644.7	603.2	580.3
42.5°	661.9	650.5	598.9	554.5	528.7
45°	614.7	601.8	550.2	504.3	484.3
47.5°	567.4	555.9	508.6	461.3	438.4
50°	517.2	507.2	464.2	416.9	392.6
52.5°	475.7	459.9	418.4	371.1	351.0
55°	427.0	414.1	375.4	331.0	313.8
57.5°	382.5	369.7	333.8	292.3	278.0
60°	341.0	322.4	292.3	256.5	245.0
62.5°	295.1	280.8	255.0	224.9	239.3
65°	253.6	239.3	216.3	220.6	183.4
67.5°	207.8	200.6	180.5	160.5	154.7
70°	169.1	160.5	153.3	131.8	126.1
72.5°	134.7	126.1	116.1	104.6	100.3
75°	101.7	94.6	88.8	84.5	93.1
77.5°	70.2	67.3	63.0	58.7	57.3
80°	45.8	44.4	43.0	41.6	40.1
82.5°	27.2	27.2	27.2	27.2	27.2
85°	14.3	15.8	17.2	18.6	20.1
87.5°	8.6	8.6	10.0	11.5	12.9
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)