

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: P545659

Luminaire Tested: **FMR-12-2-LD4-2LO-40-UNV-80-88-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: P545659
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-LD4-2LO-40-UNV-80-88-EDD
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

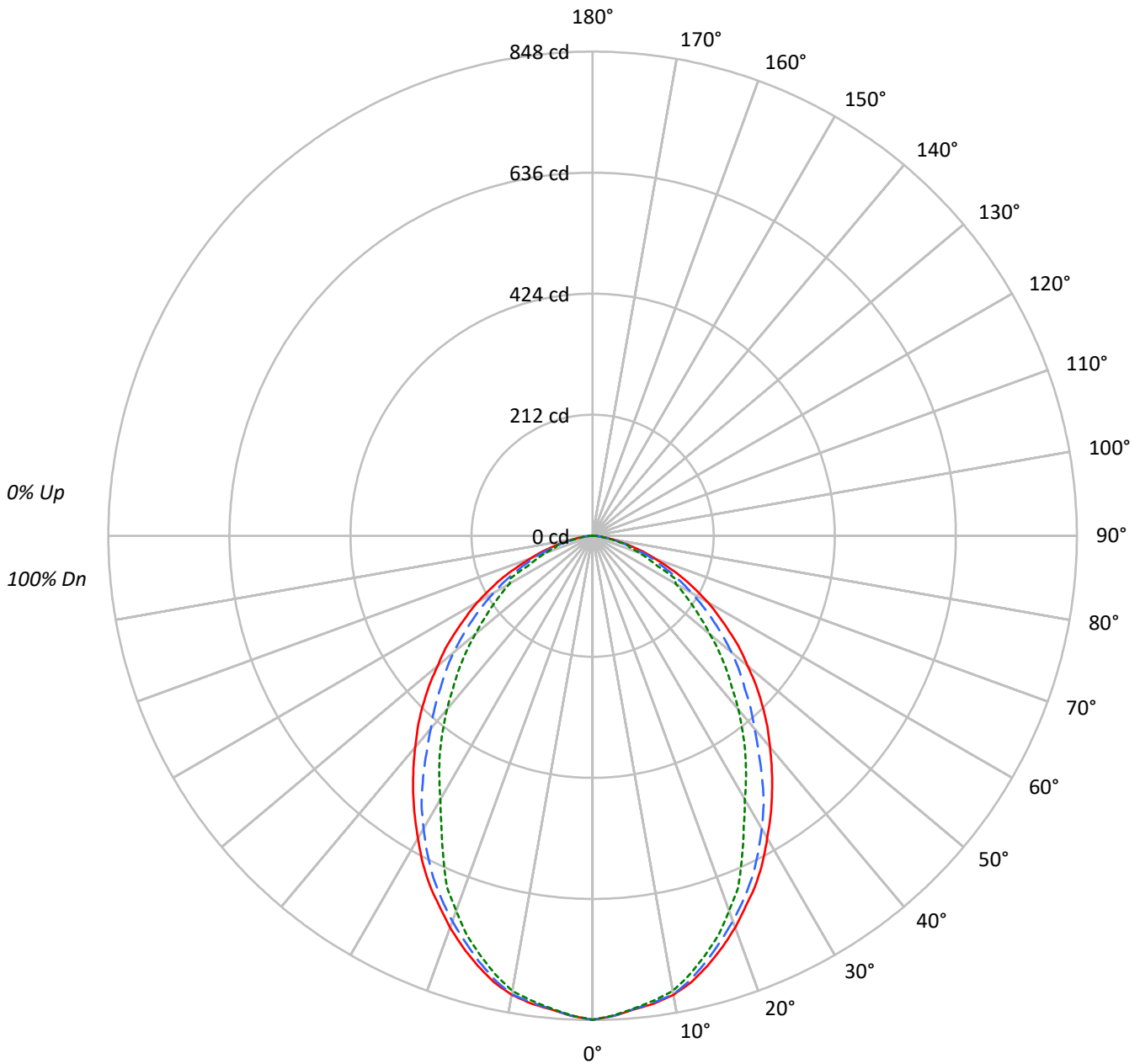
Lumens per Lamp: N/A
Luminaire Lumens: 1664.0 lumens
Efficiency: N/A
Efficacy: 71.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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									
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°	4562	4562	4562
5°	4500	4494	4489
10°	4461	4456	4423
15°	4340	4297	4237
20°	4181	4114	4002
25°	4010	3922	3678
30°	3800	3678	3313
35°	3599	3399	3064
40°	3394	3098	2788
45°	3200	2864	2521
50°	2961	2658	2248
55°	2740	2409	2014
60°	2510	2152	1804
65°	2208	1885	1597
70°	1819	1651	1356
75°	1447	1264	1325
80°	973	911	849
85°	605	729	846



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.9	4.7
10°-20°	216.5	13.0
20°-30°	299.8	18.0
30°-40°	319.7	19.2
40°-50°	291.6	17.5
50°-60°	228.5	13.7
60°-70°	148.9	8.9
70°-80°	66.0	4.0
80°-90°	14.2	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°	595.2	35.8
0°-40°	914.9	55.0
0°-60°	1435.0	86.2
0°-90°	1664.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1664.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	848	848	848	848	848	
5°	833	832	832	831	831	79
15°	779	779	771	763	760	219
25°	675	671	660	637	619	310
35°	548	544	517	478	466	342
45°	420	412	376	345	331	324
55°	292	283	257	226	215	262
65°	173	164	148	151	125	171
75°	70	65	61	58	64	75
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	847.6	847.6	847.6	847.6	847.6
2.5°	841.7	841.7	841.7	840.8	840.8
5°	832.9	831.9	831.9	831.0	831.0
7.5°	826.1	825.1	824.1	823.1	821.2
10°	816.3	816.3	815.3	810.4	809.4
12.5°	800.6	799.6	795.7	788.8	786.9
15°	779.0	779.0	771.2	763.3	760.4
17.5°	755.5	754.5	744.7	736.9	733.0
20°	730.0	728.1	718.3	705.5	698.7
22.5°	701.6	701.6	689.9	673.2	666.3
25°	675.2	671.2	660.5	636.9	619.3
27.5°	644.8	638.9	627.1	593.8	573.2
30°	611.5	608.5	591.9	548.7	533.1
32.5°	580.1	575.2	557.6	512.5	499.8
35°	547.8	543.8	517.4	478.2	466.4
37.5°	515.4	510.5	477.2	445.9	431.2
40°	483.1	477.2	441.0	412.5	396.9
42.5°	452.7	444.9	409.6	379.2	361.6
45°	420.4	411.6	376.3	344.9	331.2
47.5°	388.0	380.2	347.9	315.5	299.9
50°	353.7	346.9	317.5	285.2	268.5
52.5°	325.3	314.6	286.1	253.8	240.1
55°	292.0	283.2	256.7	226.4	214.6
57.5°	261.6	252.8	228.3	199.9	190.1
60°	233.2	220.5	199.9	175.4	167.6
62.5°	201.9	192.1	174.4	153.8	163.6
65°	173.4	163.6	148.0	150.9	125.4
67.5°	142.1	137.2	123.5	109.7	105.8
70°	115.6	109.7	104.9	90.2	86.2
72.5°	92.1	86.2	79.4	71.5	68.6
75°	69.6	64.7	60.8	57.8	63.7
77.5°	48.0	46.1	43.1	40.2	39.2
80°	31.4	30.4	29.4	28.4	27.4
82.5°	18.6	18.6	18.6	18.6	18.6
85°	9.8	10.8	11.8	12.7	13.7
87.5°	5.9	5.9	6.9	7.8	8.8
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)