

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: P545762

Luminaire Tested: **FMR-12-2-LD4-2STD-40-UNV-81-87-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: P545762
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-81-87-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

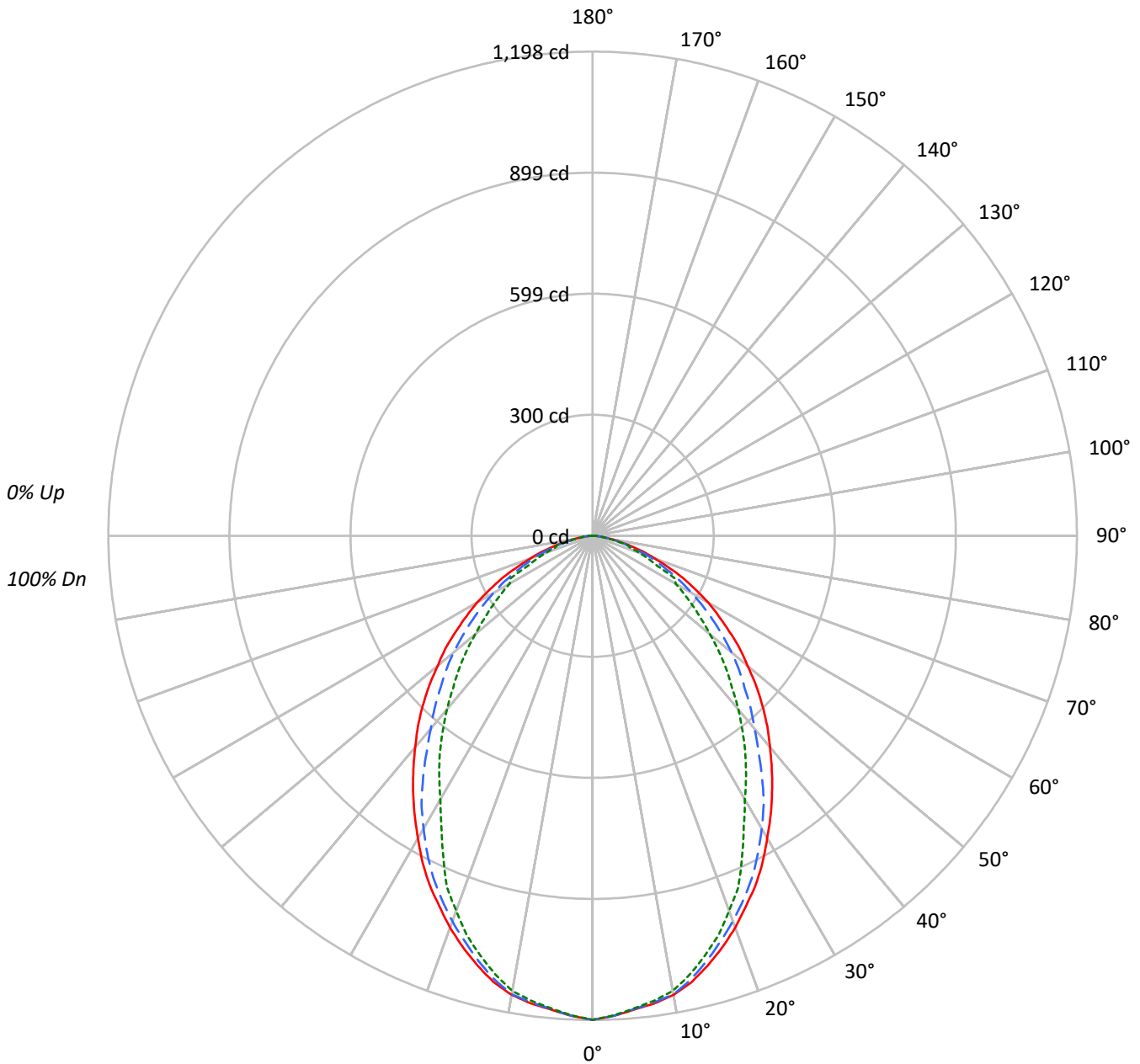
Lumens per Lamp: N/A
Luminaire Lumens: 2351.0 lumens
Efficiency: N/A
Efficacy: 70.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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																			
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°	6445	6445	6445
5°	6358	6350	6343
10°	6303	6295	6250
15°	6133	6071	5986
20°	5907	5812	5653
25°	5665	5541	5196
30°	5369	5197	4681
35°	5085	4803	4330
40°	4795	4377	3939
45°	4520	4046	3562
50°	4185	3756	3176
55°	3871	3403	2845
60°	3547	3040	2548
65°	3121	2663	2257
70°	2571	2330	1917
75°	2044	1784	1871
80°	1373	1286	1203
85°	852	1025	1198



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.5	4.7
10°-20°	305.9	13.0
20°-30°	423.6	18.0
30°-40°	451.6	19.2
40°-50°	412.0	17.5
50°-60°	322.8	13.7
60°-70°	210.4	8.9
70°-80°	93.2	4.0
80°-90°	20.0	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°	841.0	35.8
0°-40°	1292.6	55.0
0°-60°	2027.4	86.2
0°-90°	2351.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2351.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1198	1198	1198	1198	1198	
5°	1177	1175	1175	1174	1174	112
15°	1101	1101	1090	1078	1074	309
25°	954	948	933	900	875	438
35°	774	768	731	676	659	484
45°	594	582	532	487	468	458
55°	413	400	363	320	303	370
65°	245	231	209	213	177	242
75°	98	91	86	82	90	105
85°	14	15	17	18	19	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1197.6	1197.6	1197.6	1197.6	1197.6
2.5°	1189.3	1189.3	1189.3	1187.9	1187.9
5°	1176.8	1175.4	1175.4	1174.0	1174.0
7.5°	1167.1	1165.7	1164.3	1163.0	1160.2
10°	1153.3	1153.3	1151.9	1145.0	1143.6
12.5°	1131.1	1129.7	1124.2	1114.5	1111.7
15°	1100.7	1100.7	1089.6	1078.5	1074.4
17.5°	1067.4	1066.0	1052.2	1041.1	1035.6
20°	1031.4	1028.7	1014.8	996.8	987.1
22.5°	991.3	991.3	974.7	951.1	941.4
25°	953.9	948.4	933.1	899.9	875.0
27.5°	911.0	902.7	886.1	839.0	809.9
30°	863.9	859.8	836.2	775.3	753.2
32.5°	819.6	812.7	787.8	724.1	706.1
35°	773.9	768.4	731.0	675.6	659.0
37.5°	728.2	721.3	674.2	629.9	609.2
40°	682.5	674.2	623.0	582.9	560.7
42.5°	639.6	628.6	578.7	535.8	510.9
45°	593.9	581.5	531.6	487.3	468.0
47.5°	548.3	537.2	491.5	445.8	423.6
50°	499.8	490.1	448.6	402.9	379.3
52.5°	459.6	444.4	404.3	358.6	339.2
55°	412.6	400.1	362.7	319.8	303.2
57.5°	369.7	357.2	322.6	282.4	268.6
60°	329.5	311.5	282.4	247.8	236.7
62.5°	285.2	271.4	246.4	217.4	231.2
65°	245.1	231.2	209.1	213.2	177.2
67.5°	200.7	193.8	174.4	155.1	149.5
70°	163.4	155.1	148.1	127.4	121.8
72.5°	130.1	121.8	112.1	101.1	96.9
75°	98.3	91.4	85.8	81.7	90.0
77.5°	67.8	65.1	60.9	56.8	55.4
80°	44.3	42.9	41.5	40.1	38.8
82.5°	26.3	26.3	26.3	26.3	26.3
85°	13.8	15.2	16.6	18.0	19.4
87.5°	8.3	8.3	9.7	11.1	12.5
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)