

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: P545546

Luminaire Tested: **FMR-12-2-LD4-2HI-35-UNV-82-87-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: P545546
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-35-UNV-82-87-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

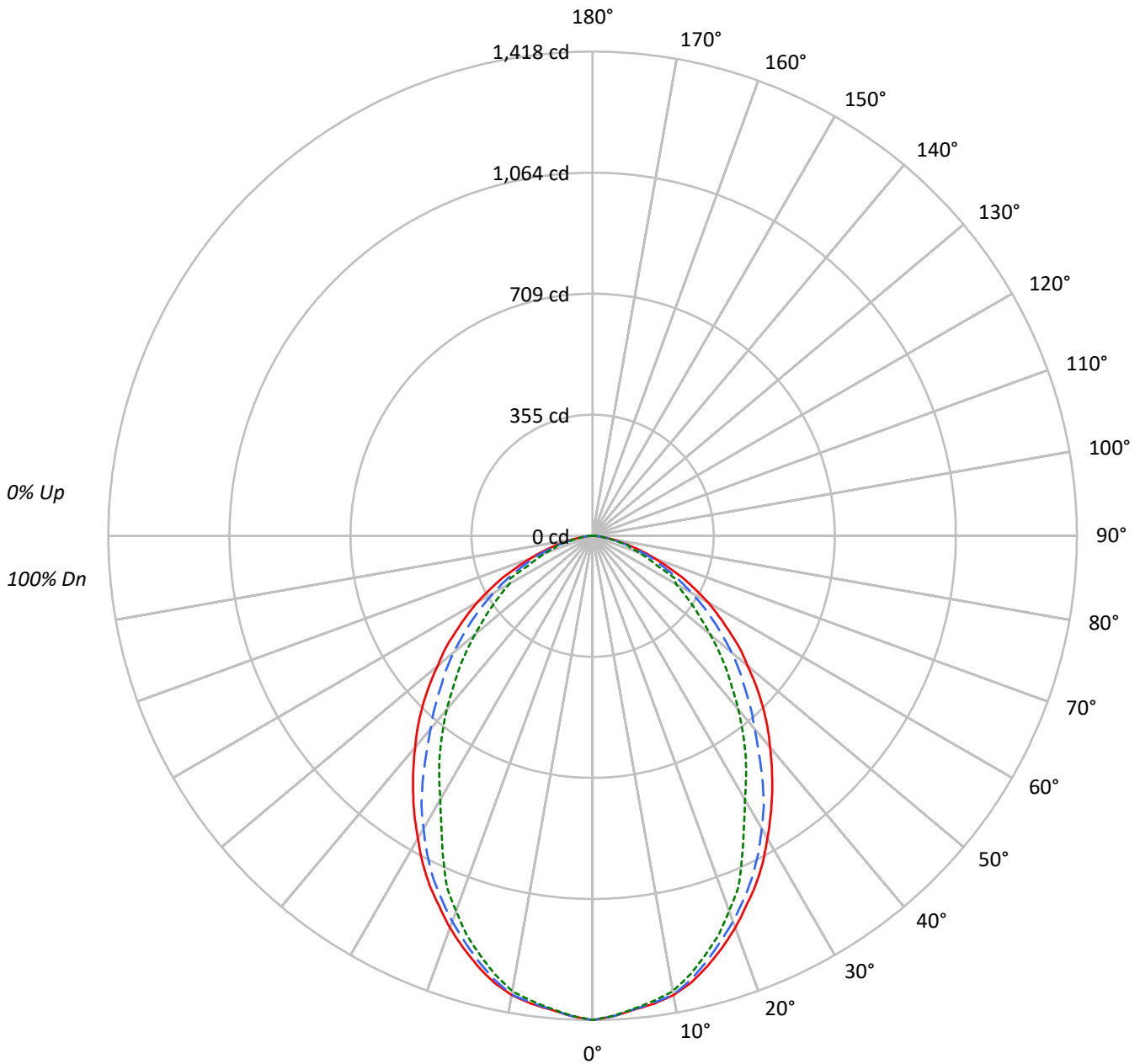
Lumens per Lamp: N/A
Luminaire Lumens: 2784.0 lumens
Efficiency: N/A
Efficacy: 64.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (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

TEST NUMBER: P545546

CATALOG NUMBER: FMR-12-2-LD4-2HI-35-UNV-82-87-EDD

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°	7632	7632	7632
5°	7528	7520	7511
10°	7464	7454	7401
15°	7262	7189	7088
20°	6995	6883	6695
25°	6708	6562	6153
30°	6357	6154	5543
35°	6022	5687	5127
40°	5679	5184	4665
45°	5353	4792	4217
50°	4955	4448	3761
55°	4585	4030	3369
60°	4200	3599	3017
65°	3696	3153	2673
70°	3045	2760	2271
75°	2420	2113	2217
80°	1627	1525	1423
85°	1013	1216	1420



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.0	4.7
10°-20°	362.3	13.0
20°-30°	501.6	18.0
30°-40°	534.8	19.2
40°-50°	487.9	17.5
50°-60°	382.2	13.7
60°-70°	249.1	8.9
70°-80°	110.4	4.0
80°-90°	23.7	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°	995.9	35.8
0°-40°	1530.7	55.0
0°-60°	2400.8	86.2
0°-90°	2784.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2784.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1418	1418	1418	1418	1418	
5°	1394	1392	1392	1390	1390	132
15°	1303	1303	1290	1277	1272	366
25°	1130	1123	1105	1066	1036	519
35°	916	910	866	800	780	573
45°	703	689	630	577	554	542
55°	489	474	430	379	359	438
65°	290	274	248	252	210	286
75°	116	108	102	97	107	125
85°	16	18	20	21	23	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1418.1	1418.1	1418.1	1418.1	1418.1
2.5°	1408.3	1408.3	1408.3	1406.7	1406.7
5°	1393.5	1391.9	1391.9	1390.3	1390.3
7.5°	1382.1	1380.4	1378.8	1377.1	1373.9
10°	1365.7	1365.7	1364.0	1355.8	1354.2
12.5°	1339.4	1337.8	1331.2	1319.8	1316.5
15°	1303.4	1303.4	1290.3	1277.1	1272.2
17.5°	1264.0	1262.4	1246.0	1232.9	1226.3
20°	1221.4	1218.1	1201.7	1180.4	1168.9
22.5°	1173.9	1173.9	1154.2	1126.3	1114.8
25°	1129.6	1123.0	1105.0	1065.6	1036.1
27.5°	1078.8	1068.9	1049.3	993.5	959.1
30°	1023.0	1018.1	990.2	918.1	891.9
32.5°	970.6	962.4	932.9	857.4	836.1
35°	916.5	909.9	865.6	800.1	780.4
37.5°	862.4	854.2	798.4	746.0	721.4
40°	808.3	798.4	737.8	690.2	664.0
42.5°	757.4	744.3	685.3	634.5	605.0
45°	703.3	688.6	629.6	577.1	554.1
47.5°	649.2	636.1	582.0	527.9	501.7
50°	591.8	580.4	531.2	477.1	449.2
52.5°	544.3	526.3	478.7	424.6	401.7
55°	488.6	473.8	429.5	378.7	359.0
57.5°	437.7	423.0	382.0	334.4	318.1
60°	390.2	368.9	334.4	293.5	280.3
62.5°	337.7	321.3	291.8	257.4	273.8
65°	290.2	273.8	247.6	252.5	209.9
67.5°	237.7	229.5	206.6	183.6	177.1
70°	193.5	183.6	175.4	150.8	144.3
72.5°	154.1	144.3	132.8	119.7	114.8
75°	116.4	108.2	101.6	96.7	106.6
77.5°	80.3	77.1	72.1	67.2	65.6
80°	52.5	50.8	49.2	47.5	45.9
82.5°	31.1	31.1	31.1	31.1	31.1
85°	16.4	18.0	19.7	21.3	23.0
87.5°	9.8	9.8	11.5	13.1	14.8
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)