

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: P545577

Luminaire Tested: **FMR-12-2-LD4-2HI-40-UNV-82-86-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: P545577
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-82-86-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

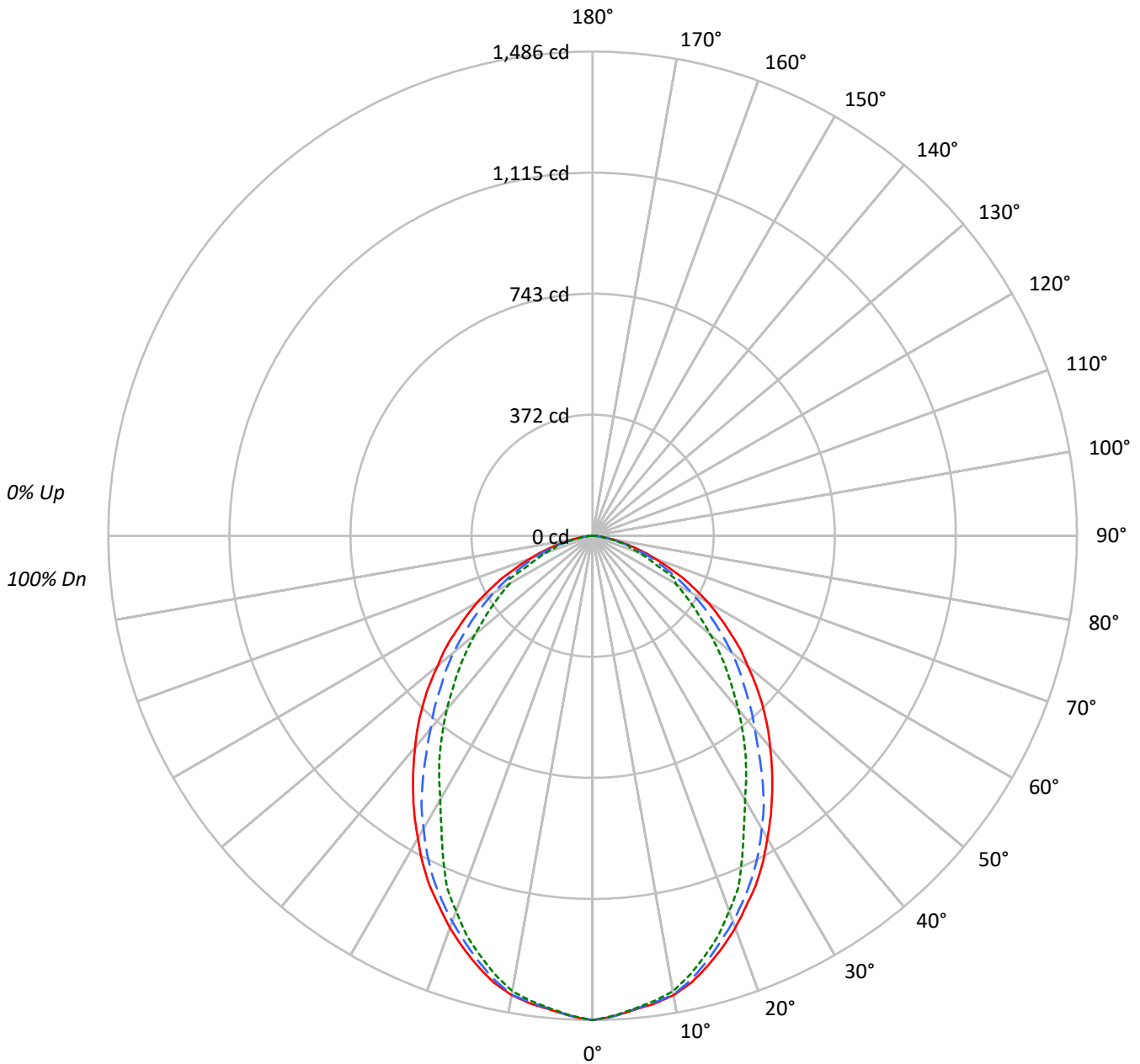
Lumens per Lamp: N/A
Luminaire Lumens: 2918.0 lumens
Efficiency: N/A
Efficacy: 67.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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: P545577

CATALOG NUMBER: FMR-12-2-LD4-2HI-40-UNV-82-86-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545577

CATALOG NUMBER: FMR-12-2-LD4-2HI-40-UNV-82-86-EDD

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°	8000	8000	8000
5°	7891	7882	7873
10°	7823	7813	7757
15°	7612	7535	7430
20°	7332	7214	7017
25°	7031	6878	6449
30°	6664	6450	5809
35°	6311	5961	5374
40°	5952	5433	4889
45°	5611	5023	4421
50°	5194	4662	3942
55°	4805	4224	3531
60°	4402	3773	3162
65°	3874	3305	2802
70°	3191	2894	2379
75°	2537	2215	2323
80°	1705	1599	1491
85°	1062	1272	1488



TEST NUMBER: P545577

CATALOG NUMBER: FMR-12-2-LD4-2HI-40-UNV-82-86-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.4	4.7
10°-20°	379.7	13.0
20°-30°	525.7	18.0
30°-40°	560.6	19.2
40°-50°	511.4	17.5
50°-60°	400.6	13.7
60°-70°	261.1	8.9
70°-80°	115.7	4.0
80°-90°	24.8	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°	1043.8	35.8
0°-40°	1604.4	55.0
0°-60°	2516.4	86.2
0°-90°	2918.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2918.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1486	1486	1486	1486	1486	
5°	1461	1459	1459	1457	1457	139
15°	1366	1366	1352	1339	1334	384
25°	1184	1177	1158	1117	1086	544
35°	961	954	907	839	818	601
45°	737	722	660	605	581	568
55°	512	497	450	397	376	459
65°	304	287	260	265	220	300
75°	122	113	106	101	112	131
85°	17	19	21	22	24	24
90°	0	0	0	0	0	



TEST NUMBER: P545577

CATALOG NUMBER: FMR-12-2-LD4-2HI-40-UNV-82-86-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1486.4	1486.4	1486.4	1486.4	1486.4
2.5°	1476.1	1476.1	1476.1	1474.4	1474.4
5°	1460.6	1458.9	1458.9	1457.2	1457.2
7.5°	1448.6	1446.9	1445.1	1443.4	1440.0
10°	1431.4	1431.4	1429.7	1421.1	1419.4
12.5°	1403.9	1402.2	1395.3	1383.3	1379.9
15°	1366.1	1366.1	1352.4	1338.6	1333.5
17.5°	1324.9	1323.1	1306.0	1292.2	1285.3
20°	1280.2	1276.7	1259.6	1237.2	1225.2
22.5°	1230.4	1230.4	1209.7	1180.5	1168.5
25°	1184.0	1177.1	1158.2	1116.9	1086.0
27.5°	1130.7	1120.4	1099.8	1041.3	1005.2
30°	1072.3	1067.1	1037.9	962.3	934.8
32.5°	1017.3	1008.7	977.8	898.7	876.4
35°	960.6	953.7	907.3	838.6	817.9
37.5°	903.9	895.3	836.8	781.9	756.1
40°	847.2	836.8	773.3	723.4	695.9
42.5°	793.9	780.1	718.3	665.0	634.1
45°	737.2	721.7	659.9	604.9	580.8
47.5°	680.5	666.7	610.0	553.3	525.8
50°	620.3	608.3	556.8	500.0	470.8
52.5°	570.5	551.6	501.8	445.1	421.0
55°	512.1	496.6	450.2	396.9	376.3
57.5°	458.8	443.3	400.4	350.5	333.4
60°	409.0	386.6	350.5	307.6	293.8
62.5°	354.0	336.8	305.9	269.8	287.0
65°	304.2	287.0	259.5	264.6	220.0
67.5°	249.2	240.6	216.5	192.5	185.6
70°	202.8	192.5	183.9	158.1	151.2
72.5°	161.5	151.2	139.2	125.4	120.3
75°	122.0	113.4	106.5	101.4	111.7
77.5°	84.2	80.8	75.6	70.5	68.7
80°	55.0	53.3	51.6	49.8	48.1
82.5°	32.6	32.6	32.6	32.6	32.6
85°	17.2	18.9	20.6	22.3	24.1
87.5°	10.3	10.3	12.0	13.7	15.5
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)