

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: P545774

Luminaire Tested: **FMR-12-2-LD4-2STD-40-UNV-82-97-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: P545774
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-82-97-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

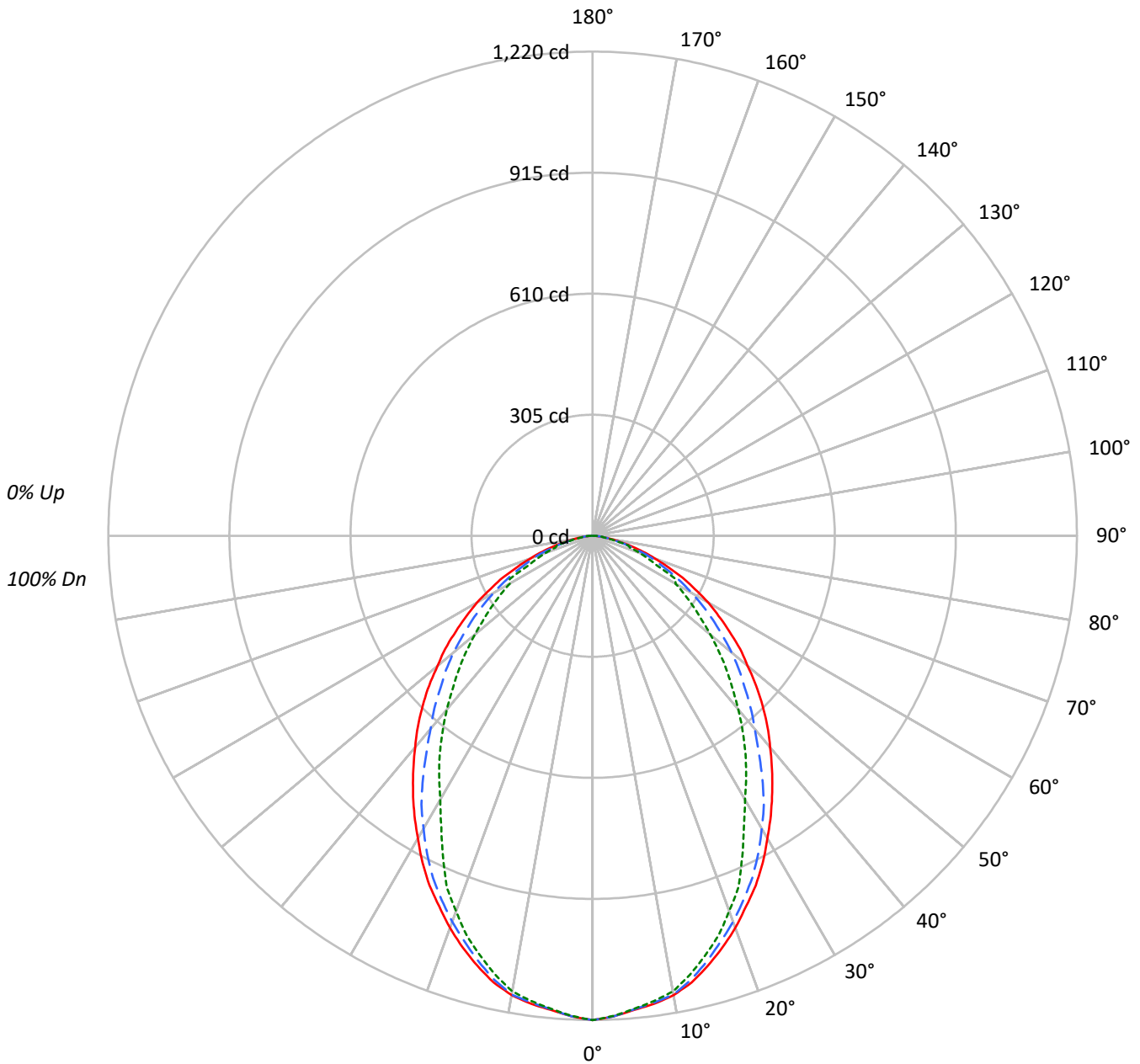
Lumens per Lamp: N/A
Luminaire Lumens: 2396.0 lumens
Efficiency: N/A
Efficacy: 72.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P545774

CATALOG NUMBER: FMR-12-2-LD4-2STD-40-UNV-82-97-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545774

CATALOG NUMBER: FMR-12-2-LD4-2STD-40-UNV-82-97-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°	6569	6569	6569
5°	6479	6472	6464
10°	6423	6415	6369
15°	6250	6187	6101
20°	6021	5923	5762
25°	5773	5647	5295
30°	5471	5296	4770
35°	5182	4895	4413
40°	4887	4461	4014
45°	4607	4124	3630
50°	4265	3828	3237
55°	3946	3469	2899
60°	3615	3098	2597
65°	3180	2714	2300
70°	2620	2376	1954
75°	2084	1820	1907
80°	1401	1311	1224
85°	871	1044	1223



TEST NUMBER: P545774

CATALOG NUMBER: FMR-12-2-LD4-2STD-40-UNV-82-97-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.6	4.7
10°-20°	311.8	13.0
20°-30°	431.7	18.0
30°-40°	460.3	19.2
40°-50°	419.9	17.5
50°-60°	329.0	13.7
60°-70°	214.4	8.9
70°-80°	95.0	4.0
80°-90°	20.4	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°	857.1	35.8
0°-40°	1317.3	55.0
0°-60°	2066.2	86.2
0°-90°	2396.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2396.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1220	1220	1220	1220	1220	
5°	1199	1198	1198	1196	1196	114
15°	1122	1122	1110	1099	1095	315
25°	972	966	951	917	892	446
35°	789	783	745	689	672	493
45°	605	593	542	497	477	466
55°	420	408	370	326	309	377
65°	250	236	213	217	181	246
75°	100	93	88	83	92	107
85°	14	16	17	18	20	20
90°	0	0	0	0	0	



TEST NUMBER: P545774

CATALOG NUMBER: FMR-12-2-LD4-2STD-40-UNV-82-97-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1220.5	1220.5	1220.5	1220.5	1220.5
2.5°	1212.0	1212.0	1212.0	1210.6	1210.6
5°	1199.3	1197.9	1197.9	1196.5	1196.5
7.5°	1189.4	1188.0	1186.6	1185.2	1182.4
10°	1175.3	1175.3	1173.9	1166.9	1165.5
12.5°	1152.8	1151.4	1145.7	1135.8	1133.0
15°	1121.7	1121.7	1110.4	1099.1	1094.9
17.5°	1087.9	1086.4	1072.3	1061.1	1055.4
20°	1051.2	1048.4	1034.2	1015.9	1006.0
22.5°	1010.3	1010.3	993.3	969.3	959.5
25°	972.2	966.5	951.0	917.1	891.7
27.5°	928.4	920.0	903.0	855.0	825.4
30°	880.4	876.2	852.2	790.1	767.6
32.5°	835.3	828.2	802.8	737.9	719.6
35°	788.7	783.1	745.0	688.6	671.6
37.5°	742.2	735.1	687.1	642.0	620.8
40°	695.6	687.1	634.9	594.0	571.4
42.5°	651.9	640.6	589.8	546.0	520.6
45°	605.3	592.6	541.8	496.7	476.9
47.5°	558.7	547.5	500.9	454.3	431.8
50°	509.4	499.5	457.2	410.6	386.6
52.5°	468.4	452.9	412.0	365.4	345.7
55°	420.5	407.8	369.7	325.9	309.0
57.5°	376.7	364.0	328.8	287.8	273.7
60°	335.8	317.5	287.8	252.6	241.3
62.5°	290.7	276.6	251.2	221.5	235.6
65°	249.7	235.6	213.1	217.3	180.6
67.5°	204.6	197.5	177.8	158.0	152.4
70°	166.5	158.0	151.0	129.8	124.2
72.5°	132.6	124.2	114.3	103.0	98.8
75°	100.2	93.1	87.5	83.2	91.7
77.5°	69.1	66.3	62.1	57.8	56.4
80°	45.2	43.7	42.3	40.9	39.5
82.5°	26.8	26.8	26.8	26.8	26.8
85°	14.1	15.5	16.9	18.3	19.8
87.5°	8.5	8.5	9.9	11.3	12.7
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)