

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: P547497

Luminaire Tested: **FMR-24-4-LD4-4STD-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: P547497
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-24-4-LD4-4STD-40-UNV-82-86-EDD
Description: 2X4 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

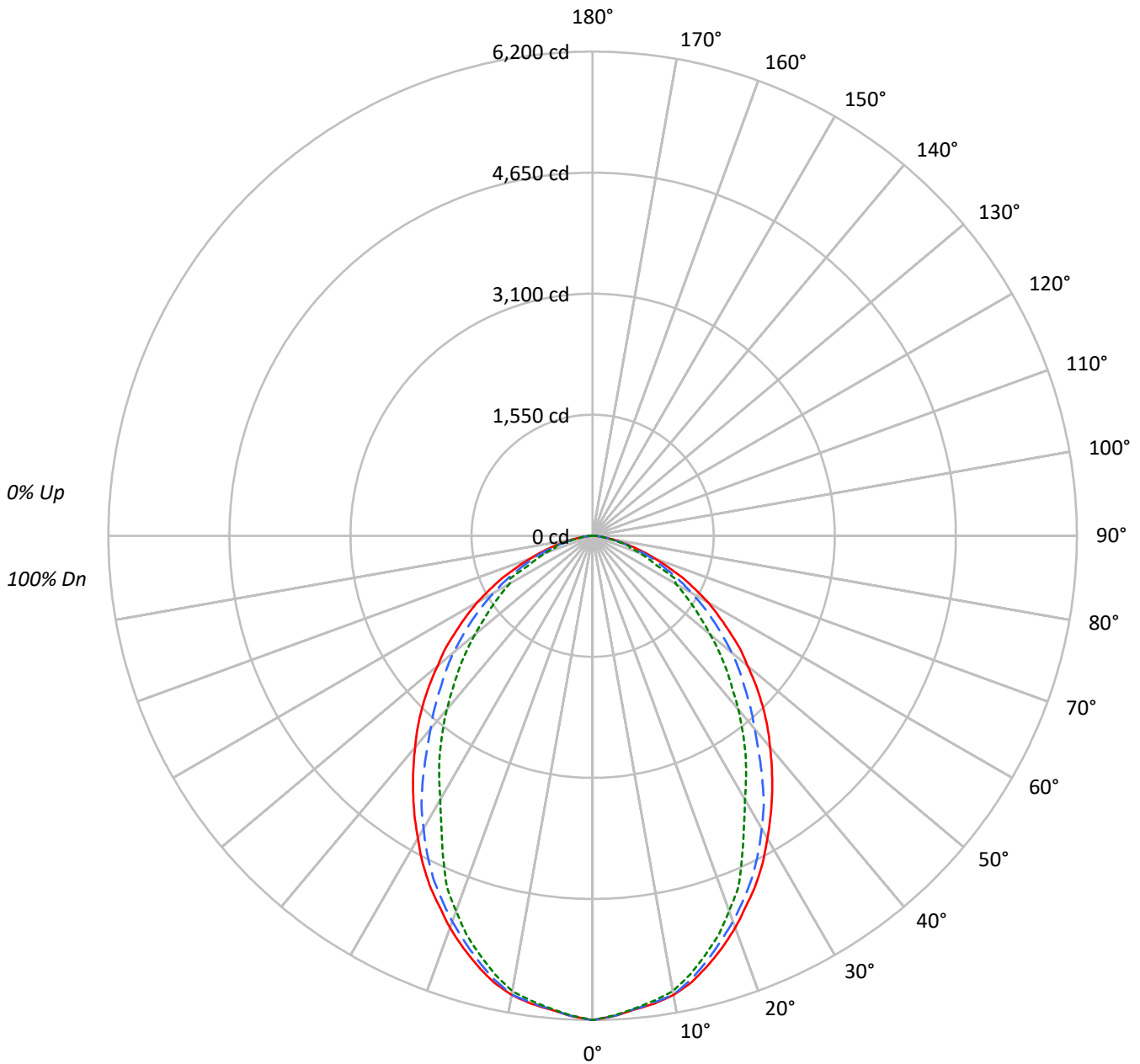
Lumens per Lamp: N/A
Luminaire Lumens: 12172.0 lumens
Efficiency: N/A
Efficacy: 91.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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: P547497

CATALOG NUMBER: FMR-24-4-LD4-4STD-40-UNV-82-86-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°	8342	8342	8342
5°	8229	8219	8210
10°	8158	8148	8089
15°	7938	7858	7748
20°	7646	7523	7318
25°	7332	7172	6725
30°	6949	6726	6058
35°	6581	6217	5604
40°	6207	5665	5099
45°	5851	5237	4610
50°	5416	4861	4111
55°	5011	4405	3682
60°	4591	3935	3298
65°	4039	3446	2921
70°	3327	3017	2482
75°	2646	2310	2422
80°	1777	1666	1555
85°	1107	1328	1550



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	577.2	4.7
10°-20°	1584.0	13.0
20°-30°	2192.9	18.0
30°-40°	2338.3	19.2
40°-50°	2133.2	17.5
50°-60°	1671.2	13.7
60°-70°	1089.2	8.9
70°-80°	482.6	4.0
80°-90°	103.6	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°	4354.0	35.8
0°-40°	6692.3	55.0
0°-60°	10496.7	86.2
0°-90°	12172.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12172.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6200	6200	6200	6200	6200	
5°	6093	6086	6086	6078	6078	578
15°	5698	5698	5641	5584	5562	1602
25°	4939	4910	4831	4659	4530	2267
35°	4007	3978	3785	3498	3412	2505
45°	3075	3010	2752	2523	2423	2369
55°	2136	2072	1878	1656	1570	1916
65°	1269	1197	1082	1104	918	1250
75°	509	473	444	423	466	545
85°	72	79	86	93	100	99
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6200.3	6200.3	6200.3	6200.3	6200.3
2.5°	6157.2	6157.2	6157.2	6150.1	6150.1
5°	6092.7	6085.6	6085.6	6078.4	6078.4
7.5°	6042.6	6035.4	6028.2	6021.1	6006.7
10°	5970.9	5970.9	5963.7	5927.9	5920.7
12.5°	5856.2	5849.0	5820.4	5770.2	5755.8
15°	5698.5	5698.5	5641.2	5583.8	5562.3
17.5°	5526.5	5519.3	5447.6	5390.3	5361.6
20°	5340.1	5325.8	5254.1	5160.9	5110.7
22.5°	5132.2	5132.2	5046.2	4924.4	4874.2
25°	4938.7	4910.0	4831.2	4659.2	4530.1
27.5°	4716.5	4673.5	4587.5	4343.8	4193.2
30°	4472.8	4451.3	4329.4	4014.0	3899.4
32.5°	4243.4	4207.6	4078.5	3748.8	3655.6
35°	4006.9	3978.2	3784.7	3497.9	3411.9
37.5°	3770.3	3734.5	3490.8	3261.4	3153.9
40°	3533.8	3490.8	3225.6	3017.7	2903.0
42.5°	3311.6	3254.2	2996.2	2774.0	2645.0
45°	3075.0	3010.5	2752.5	2523.1	2422.8
47.5°	2838.5	2781.2	2544.6	2308.1	2193.4
50°	2587.6	2537.4	2322.4	2085.9	1964.0
52.5°	2379.8	2300.9	2093.0	1856.5	1756.1
55°	2136.0	2071.5	1878.0	1655.8	1569.8
57.5°	1913.8	1849.3	1670.1	1462.3	1390.6
60°	1706.0	1612.8	1462.3	1283.1	1225.7
62.5°	1476.6	1404.9	1275.9	1125.4	1197.0
65°	1268.7	1197.0	1082.4	1103.9	917.5
67.5°	1039.3	1003.5	903.2	802.8	774.1
70°	845.8	802.8	767.0	659.4	630.8
72.5°	673.8	630.8	580.6	523.3	501.8
75°	508.9	473.1	444.4	422.9	465.9
77.5°	351.2	336.9	315.4	293.9	286.7
80°	229.4	222.2	215.0	207.9	200.7
82.5°	136.2	136.2	136.2	136.2	136.2
85°	71.7	78.8	86.0	93.2	100.4
87.5°	43.0	43.0	50.2	57.3	64.5
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)