

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: P546985

Luminaire Tested: **FMR-24-4-LD4-3HI-35-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: P546985
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-LD4-3HI-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

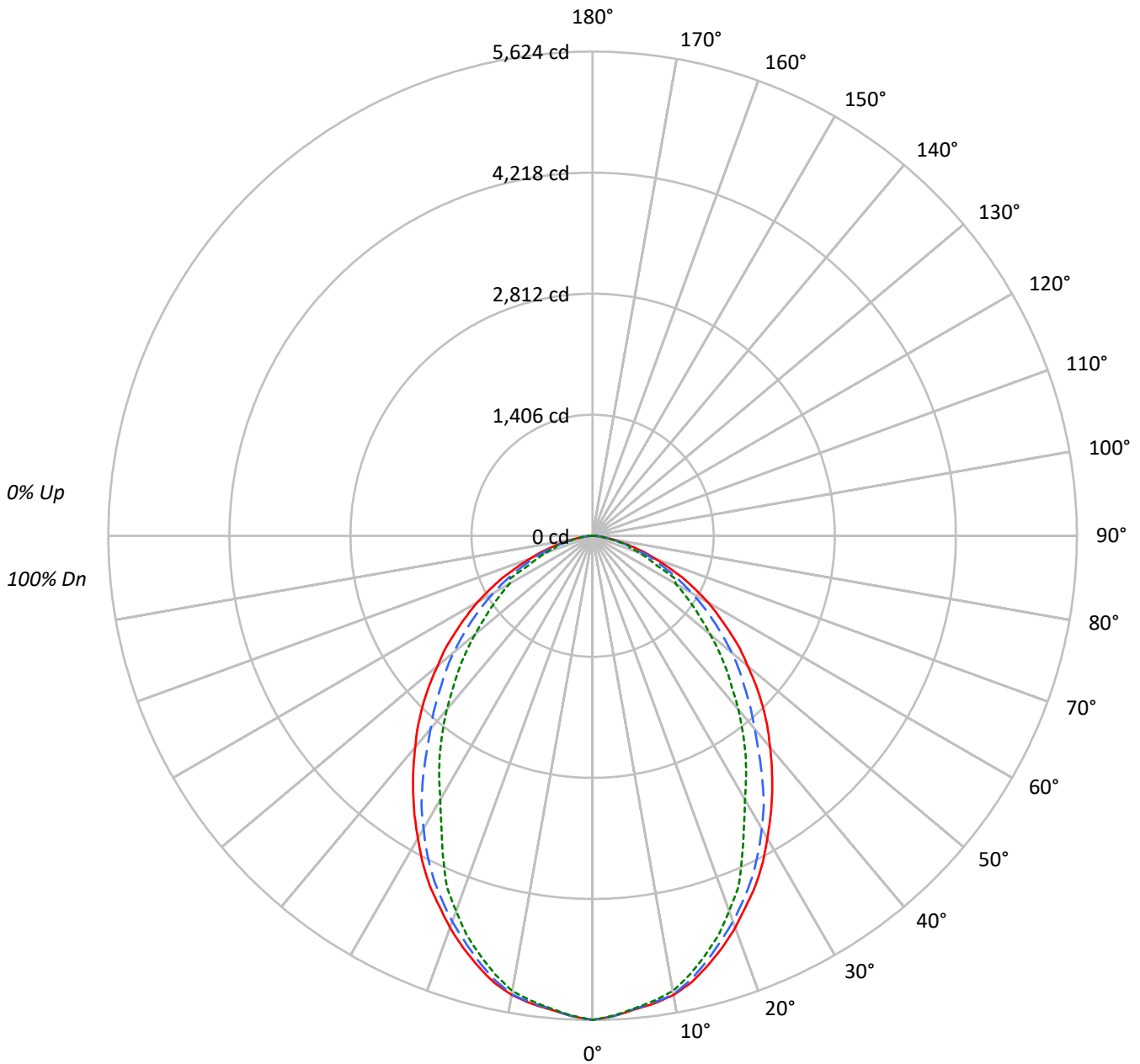
Lumens per Lamp: N/A
Luminaire Lumens: 11040.0 lumens
Efficiency: N/A
Efficacy: 85.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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: P546985

CATALOG NUMBER: FMR-24-4-LD4-3HI-35-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°	7566	7566	7566
5°	7464	7455	7446
10°	7399	7390	7337
15°	7199	7127	7027
20°	6935	6823	6637
25°	6650	6505	6100
30°	6303	6101	5495
35°	5969	5638	5083
40°	5629	5139	4625
45°	5307	4750	4181
50°	4913	4409	3729
55°	4545	3996	3340
60°	4164	3569	2992
65°	3663	3125	2649
70°	3018	2736	2251
75°	2400	2096	2197
80°	1612	1511	1410
85°	1003	1204	1405



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	523.5	4.7
10°-20°	1436.7	13.0
20°-30°	1989.0	18.0
30°-40°	2120.8	19.2
40°-50°	1934.8	17.5
50°-60°	1515.8	13.7
60°-70°	987.9	8.9
70°-80°	437.7	4.0
80°-90°	94.0	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°	3949.1	35.8
0°-40°	6069.9	55.0
0°-60°	9520.4	86.2
0°-90°	11040.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11040.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5624	5624	5624	5624	5624	
5°	5526	5520	5520	5513	5513	525
15°	5168	5168	5116	5064	5045	1453
25°	4479	4453	4382	4226	4109	2056
35°	3634	3608	3433	3173	3095	2272
45°	2789	2730	2496	2288	2197	2148
55°	1937	1879	1703	1502	1424	1738
65°	1151	1086	982	1001	832	1134
75°	462	429	403	384	423	495
85°	65	72	78	84	91	90
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5623.6	5623.6	5623.6	5623.6	5623.6
2.5°	5584.6	5584.6	5584.6	5578.1	5578.1
5°	5526.1	5519.6	5519.6	5513.1	5513.1
7.5°	5480.6	5474.1	5467.6	5461.1	5448.1
10°	5415.6	5415.6	5409.1	5376.6	5370.1
12.5°	5311.6	5305.1	5279.1	5233.6	5220.5
15°	5168.5	5168.5	5116.5	5064.5	5045.0
17.5°	5012.5	5006.0	4941.0	4889.0	4863.0
20°	4843.5	4830.5	4765.5	4680.9	4635.4
22.5°	4654.9	4654.9	4576.9	4466.4	4420.9
25°	4479.4	4453.4	4381.9	4225.8	4108.8
27.5°	4277.9	4238.9	4160.8	3939.8	3803.3
30°	4056.8	4037.3	3926.8	3640.7	3536.7
32.5°	3848.8	3816.3	3699.2	3400.2	3315.7
35°	3634.2	3608.2	3432.7	3172.6	3094.6
37.5°	3419.7	3387.2	3166.1	2958.1	2860.6
40°	3205.1	3166.1	2925.6	2737.0	2633.0
42.5°	3003.6	2951.6	2717.5	2516.0	2399.0
45°	2789.1	2730.5	2496.5	2288.5	2197.4
47.5°	2574.5	2522.5	2308.0	2093.4	1989.4
50°	2347.0	2301.5	2106.4	1891.9	1781.4
52.5°	2158.4	2086.9	1898.4	1683.8	1592.8
55°	1937.4	1878.9	1703.3	1501.8	1423.8
57.5°	1735.8	1677.3	1514.8	1326.3	1261.3
60°	1547.3	1462.8	1326.3	1163.7	1111.7
62.5°	1339.3	1274.3	1157.2	1020.7	1085.7
65°	1150.7	1085.7	981.7	1001.2	832.2
67.5°	942.7	910.2	819.2	728.1	702.1
70°	767.2	728.1	695.6	598.1	572.1
72.5°	611.1	572.1	526.6	474.6	455.1
75°	461.6	429.1	403.1	383.6	422.6
77.5°	318.6	305.6	286.1	266.6	260.1
80°	208.0	201.5	195.0	188.5	182.0
82.5°	123.5	123.5	123.5	123.5	123.5
85°	65.0	71.5	78.0	84.5	91.0
87.5°	39.0	39.0	45.5	52.0	58.5
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)