

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: P547483

Luminaire Tested: **FMR-24-4-LD4-4STD-40-UNV-80-88-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: P547483
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-80-88-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

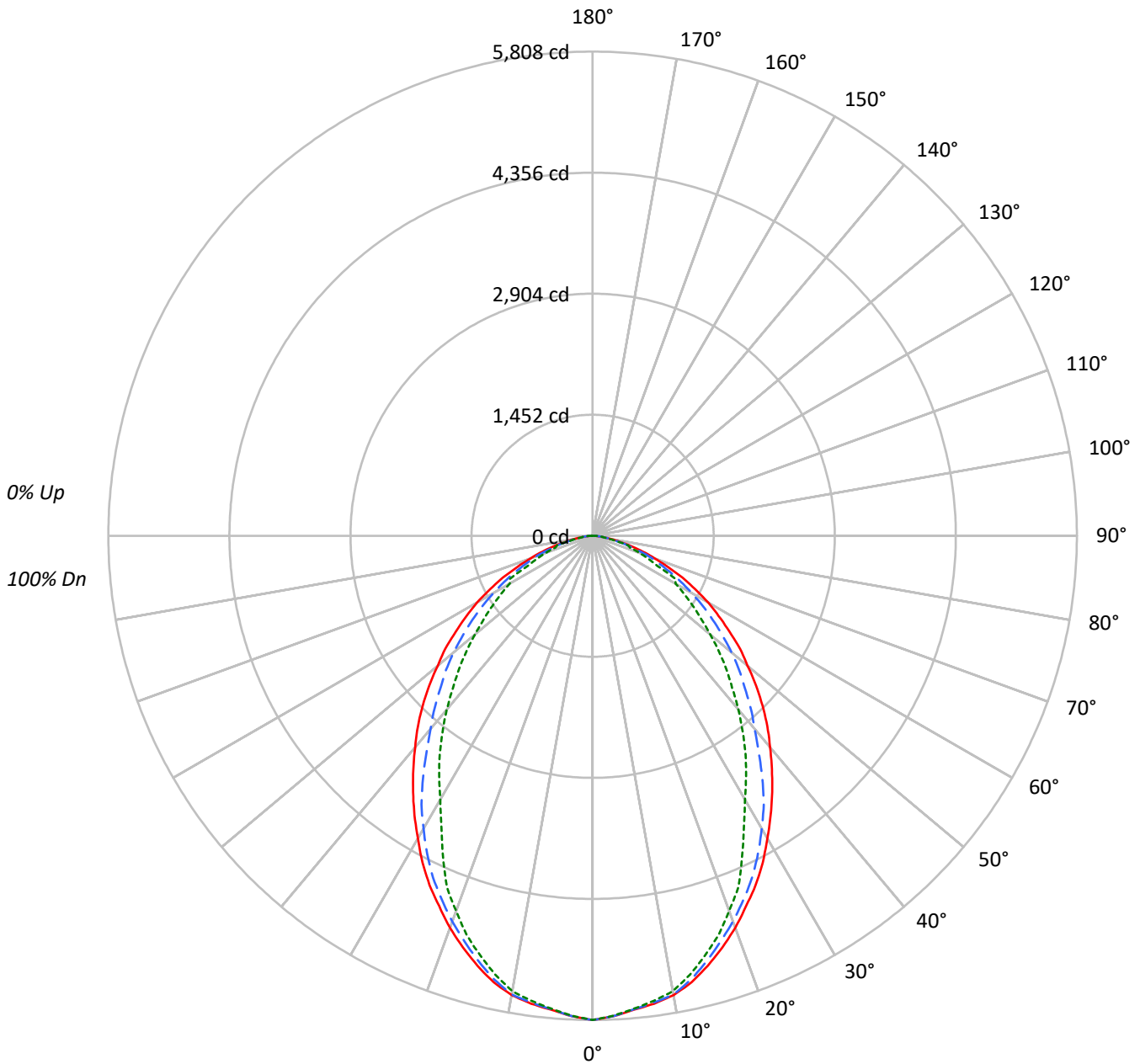
Lumens per Lamp: N/A
Luminaire Lumens: 11403.0 lumens
Efficiency: N/A
Efficacy: 85.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	7815	7815	7815
5°	7709	7700	7691
10°	7642	7633	7578
15°	7436	7361	7259
20°	7163	7048	6855
25°	6869	6719	6300
30°	6510	6301	5675
35°	6166	5824	5250
40°	5815	5308	4777
45°	5482	4907	4319
50°	5074	4554	3851
55°	4694	4127	3450
60°	4301	3686	3090
65°	3784	3228	2736
70°	3117	2827	2325
75°	2479	2164	2269
80°	1665	1561	1457
85°	1037	1244	1451



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	540.7	4.7
10°-20°	1483.9	13.0
20°-30°	2054.4	18.0
30°-40°	2190.5	19.2
40°-50°	1998.4	17.5
50°-60°	1565.6	13.7
60°-70°	1020.4	8.9
70°-80°	452.1	4.0
80°-90°	97.1	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°	4078.9	35.8
0°-40°	6269.5	55.0
0°-60°	9833.5	86.2
0°-90°	11403.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11403.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5808	5808	5808	5808	5808	
5°	5708	5701	5701	5694	5694	542
15°	5338	5338	5285	5231	5211	1501
25°	4627	4600	4526	4365	4244	2124
35°	3754	3727	3546	3277	3196	2347
45°	2881	2820	2579	2364	2270	2219
55°	2001	1941	1759	1551	1471	1795
65°	1189	1121	1014	1034	860	1171
75°	477	443	416	396	436	511
85°	67	74	81	87	94	93
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5808.5	5808.5	5808.5	5808.5	5808.5
2.5°	5768.2	5768.2	5768.2	5761.5	5761.5
5°	5707.8	5701.1	5701.1	5694.4	5694.4
7.5°	5660.8	5654.1	5647.4	5640.7	5627.2
10°	5593.7	5593.7	5586.9	5553.4	5546.6
12.5°	5486.2	5479.5	5452.6	5405.6	5392.2
15°	5338.5	5338.5	5284.8	5231.0	5210.9
17.5°	5177.3	5170.6	5103.5	5049.7	5022.9
20°	5002.7	4989.3	4922.1	4834.9	4787.8
22.5°	4808.0	4808.0	4727.4	4613.3	4566.2
25°	4626.7	4599.8	4526.0	4364.8	4243.9
27.5°	4418.5	4378.2	4297.6	4069.3	3928.3
30°	4190.2	4170.1	4055.9	3760.4	3653.0
32.5°	3975.3	3941.7	3820.9	3512.0	3424.7
35°	3753.7	3726.9	3545.6	3277.0	3196.4
37.5°	3532.1	3498.6	3270.2	3055.4	2954.6
40°	3310.5	3270.2	3021.8	2827.0	2719.6
42.5°	3102.4	3048.6	2806.9	2598.7	2477.9
45°	2880.8	2820.3	2578.6	2363.7	2269.7
47.5°	2659.2	2605.4	2383.8	2162.3	2054.8
50°	2424.1	2377.1	2175.7	1954.1	1839.9
52.5°	2229.4	2155.5	1960.8	1739.2	1645.2
55°	2001.1	1940.7	1759.3	1551.2	1470.6
57.5°	1792.9	1732.5	1564.6	1369.9	1302.7
60°	1598.2	1510.9	1369.9	1202.0	1148.3
62.5°	1383.3	1316.2	1195.3	1054.3	1121.4
65°	1188.6	1121.4	1014.0	1034.1	859.5
67.5°	973.7	940.1	846.1	752.1	725.2
70°	792.4	752.1	718.5	617.8	590.9
72.5°	631.2	590.9	543.9	490.2	470.1
75°	476.8	443.2	416.3	396.2	436.5
77.5°	329.0	315.6	295.5	275.3	268.6
80°	214.9	208.2	201.5	194.7	188.0
82.5°	127.6	127.6	127.6	127.6	127.6
85°	67.2	73.9	80.6	87.3	94.0
87.5°	40.3	40.3	47.0	53.7	60.4
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)