

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: P547292

Luminaire Tested: **FMR-24-4-LD4-4HI-40-UNV-80-94-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: P547292
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-LD4-4HI-40-UNV-80-94-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

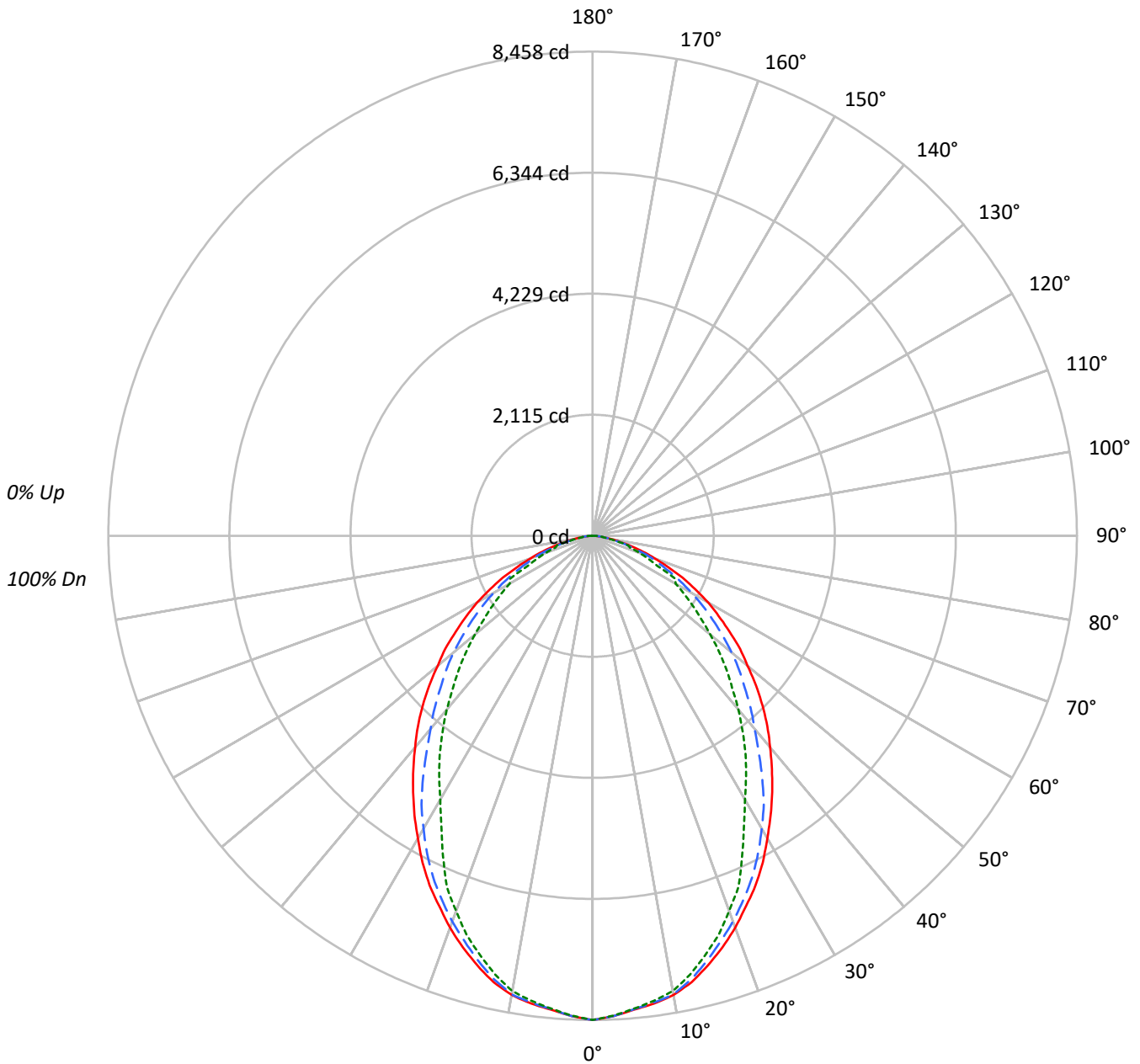
Lumens per Lamp: N/A
Luminaire Lumens: 16604.0 lumens
Efficiency: N/A
Efficacy: 96.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
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					20					
RC	80					70					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				100				
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75				
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65				
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50				
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44				
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40				
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36				
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33				
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11380	11380	11380
5°	11225	11212	11199
10°	11128	11115	11034
15°	10828	10719	10569
20°	10430	10262	9982
25°	10002	9784	9174
30°	9479	9175	8264
35°	8978	8480	7645
40°	8467	7728	6955
45°	7982	7144	6289
50°	7389	6631	5608
55°	6835	6009	5023
60°	6262	5368	4499
65°	5510	4701	3985
70°	4539	4116	3385
75°	3609	3151	3304
80°	2424	2273	2122
85°	1510	1811	2113



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	787.3	4.7
10°-20°	2160.7	13.0
20°-30°	2991.4	18.0
30°-40°	3189.7	19.2
40°-50°	2909.9	17.5
50°-60°	2279.7	13.7
60°-70°	1485.8	8.9
70°-80°	658.3	4.0
80°-90°	141.3	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°	5939.4	35.8
0°-40°	9129.1	55.0
0°-60°	14318.6	86.2
0°-90°	16604.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16604.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8458	8458	8458	8458	8458	
5°	8311	8301	8301	8292	8292	789
15°	7773	7773	7695	7617	7588	2185
25°	6737	6698	6590	6356	6180	3093
35°	5466	5427	5163	4772	4654	3417
45°	4195	4107	3755	3442	3305	3231
55°	2914	2826	2562	2259	2141	2613
65°	1731	1633	1476	1506	1252	1706
75°	694	645	606	577	636	744
85°	98	108	117	127	137	136
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8457.9	8457.9	8457.9	8457.9	8457.9
2.5°	8399.2	8399.2	8399.2	8389.4	8389.4
5°	8311.2	8301.4	8301.4	8291.6	8291.6
7.5°	8242.7	8233.0	8223.2	8213.4	8193.9
10°	8145.0	8145.0	8135.2	8086.3	8076.5
12.5°	7988.5	7978.7	7939.6	7871.2	7851.6
15°	7773.4	7773.4	7695.2	7617.0	7587.6
17.5°	7538.7	7529.0	7431.2	7353.0	7313.8
20°	7284.5	7265.0	7167.2	7040.1	6971.6
22.5°	7001.0	7001.0	6883.6	6717.4	6649.0
25°	6737.0	6697.8	6590.3	6355.6	6179.6
27.5°	6433.8	6375.2	6257.8	5925.4	5720.1
30°	6101.4	6072.1	5905.8	5475.6	5319.2
32.5°	5788.5	5739.6	5563.6	5113.8	4986.7
35°	5465.8	5426.7	5162.7	4771.6	4654.3
37.5°	5143.2	5094.3	4761.8	4448.9	4302.3
40°	4820.5	4761.8	4400.0	4116.5	3960.0
42.5°	4517.4	4439.2	4087.1	3784.0	3608.0
45°	4194.7	4106.7	3754.7	3441.8	3304.9
47.5°	3872.0	3793.8	3471.1	3148.5	2992.0
50°	3529.8	3461.4	3168.0	2845.4	2679.1
52.5°	3246.3	3138.7	2855.1	2532.5	2395.6
55°	2913.8	2825.8	2561.8	2258.7	2141.4
57.5°	2610.7	2522.7	2278.2	1994.7	1896.9
60°	2327.1	2200.0	1994.7	1750.2	1672.0
62.5°	2014.2	1916.5	1740.5	1535.1	1632.9
65°	1730.7	1632.9	1476.5	1505.8	1251.6
67.5°	1417.8	1368.9	1232.0	1095.1	1056.0
70°	1153.8	1095.1	1046.2	899.6	860.5
72.5°	919.1	860.5	792.0	713.8	684.5
75°	694.2	645.3	606.2	576.9	635.6
77.5°	479.1	459.6	430.2	400.9	391.1
80°	312.9	303.1	293.3	283.6	273.8
82.5°	185.8	185.8	185.8	185.8	185.8
85°	97.8	107.6	117.3	127.1	136.9
87.5°	58.7	58.7	68.4	78.2	88.0
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)