

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: P547030

Luminaire Tested: **FMR-24-4-LD4-3HI-40-UNV-93-97-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: P547030
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-40-UNV-93-97-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDES
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

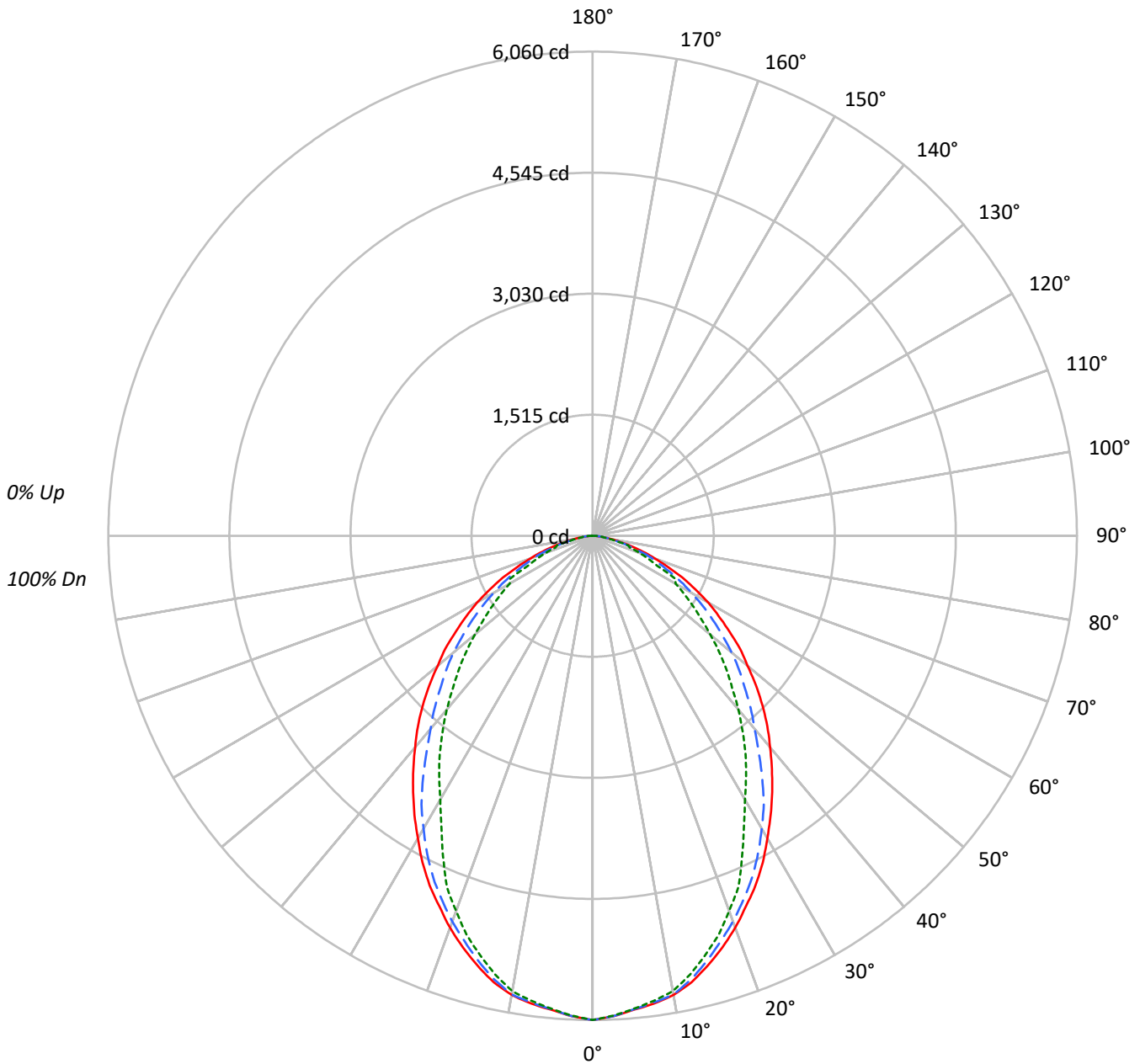
Lumens per Lamp: N/A
Luminaire Lumens: 11897.0 lumens
Efficiency: N/A
Efficacy: 91.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
Input Voltage (V): NR
Input Current (A_{in}): 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°	8154	8154	8154
5°	8043	8034	8024
10°	7973	7964	7906
15°	7758	7680	7573
20°	7473	7353	7152
25°	7166	7010	6573
30°	6792	6574	5921
35°	6433	6076	5478
40°	6066	5537	4984
45°	5719	5119	4506
50°	5294	4751	4018
55°	4898	4306	3599
60°	4487	3846	3224
65°	3948	3368	2855
70°	3252	2949	2425
75°	2586	2258	2367
80°	1737	1629	1520
85°	1082	1298	1514



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	564.1	4.7
10°-20°	1548.2	13.0
20°-30°	2143.4	18.0
30°-40°	2285.4	19.2
40°-50°	2085.0	17.5
50°-60°	1633.4	13.7
60°-70°	1064.6	8.9
70°-80°	471.7	4.0
80°-90°	101.3	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°	4255.7	35.8
0°-40°	6541.1	55.0
0°-60°	10259.5	86.2
0°-90°	11897.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11897.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6060	6060	6060	6060	6060	
5°	5955	5948	5948	5941	5941	565
15°	5570	5570	5514	5458	5437	1566
25°	4827	4799	4722	4554	4428	2216
35°	3916	3888	3699	3419	3335	2448
45°	3006	2942	2690	2466	2368	2315
55°	2088	2025	1836	1618	1534	1873
65°	1240	1170	1058	1079	897	1222
75°	497	462	434	413	455	533
85°	70	77	84	91	98	97
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6060.2	6060.2	6060.2	6060.2	6060.2
2.5°	6018.1	6018.1	6018.1	6011.1	6011.1
5°	5955.1	5948.1	5948.1	5941.1	5941.1
7.5°	5906.0	5899.0	5892.0	5885.0	5871.0
10°	5836.0	5836.0	5829.0	5793.9	5786.9
12.5°	5723.9	5716.9	5688.9	5639.8	5625.8
15°	5569.8	5569.8	5513.7	5457.7	5436.6
17.5°	5401.6	5394.6	5324.5	5268.5	5240.5
20°	5219.5	5205.4	5135.4	5044.3	4995.3
22.5°	5016.3	5016.3	4932.2	4813.1	4764.1
25°	4827.1	4799.1	4722.0	4553.9	4427.8
27.5°	4609.9	4567.9	4483.8	4245.6	4098.5
30°	4371.7	4350.7	4231.6	3923.3	3811.3
32.5°	4147.5	4112.5	3986.4	3664.1	3573.0
35°	3916.3	3888.3	3699.2	3418.9	3334.8
37.5°	3685.1	3650.1	3411.9	3187.7	3082.6
40°	3453.9	3411.9	3152.7	2949.5	2837.4
42.5°	3236.8	3180.7	2928.5	2711.3	2585.2
45°	3005.6	2942.5	2690.3	2466.1	2368.0
47.5°	2774.4	2718.3	2487.1	2255.9	2143.8
50°	2529.2	2480.1	2269.9	2038.7	1919.6
52.5°	2326.0	2248.9	2045.7	1814.5	1716.5
55°	2087.8	2024.7	1835.6	1618.4	1534.3
57.5°	1870.6	1807.5	1632.4	1429.2	1359.2
60°	1667.4	1576.3	1429.2	1254.1	1198.0
62.5°	1443.2	1373.2	1247.1	1099.9	1170.0
65°	1240.1	1170.0	1057.9	1078.9	896.8
67.5°	1015.9	980.8	882.8	784.7	756.6
70°	826.7	784.7	749.6	644.6	616.5
72.5°	658.6	616.5	567.5	511.4	490.4
75°	497.4	462.4	434.4	413.4	455.4
77.5°	343.3	329.3	308.3	287.2	280.2
80°	224.2	217.2	210.2	203.2	196.2
82.5°	133.1	133.1	133.1	133.1	133.1
85°	70.1	77.1	84.1	91.1	98.1
87.5°	42.0	42.0	49.0	56.0	63.1
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)