

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: P547327

Luminaire Tested: **FMR-24-4-LD4-4HI-50-UNV-81-84-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: P547327
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-50-UNV-81-84-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

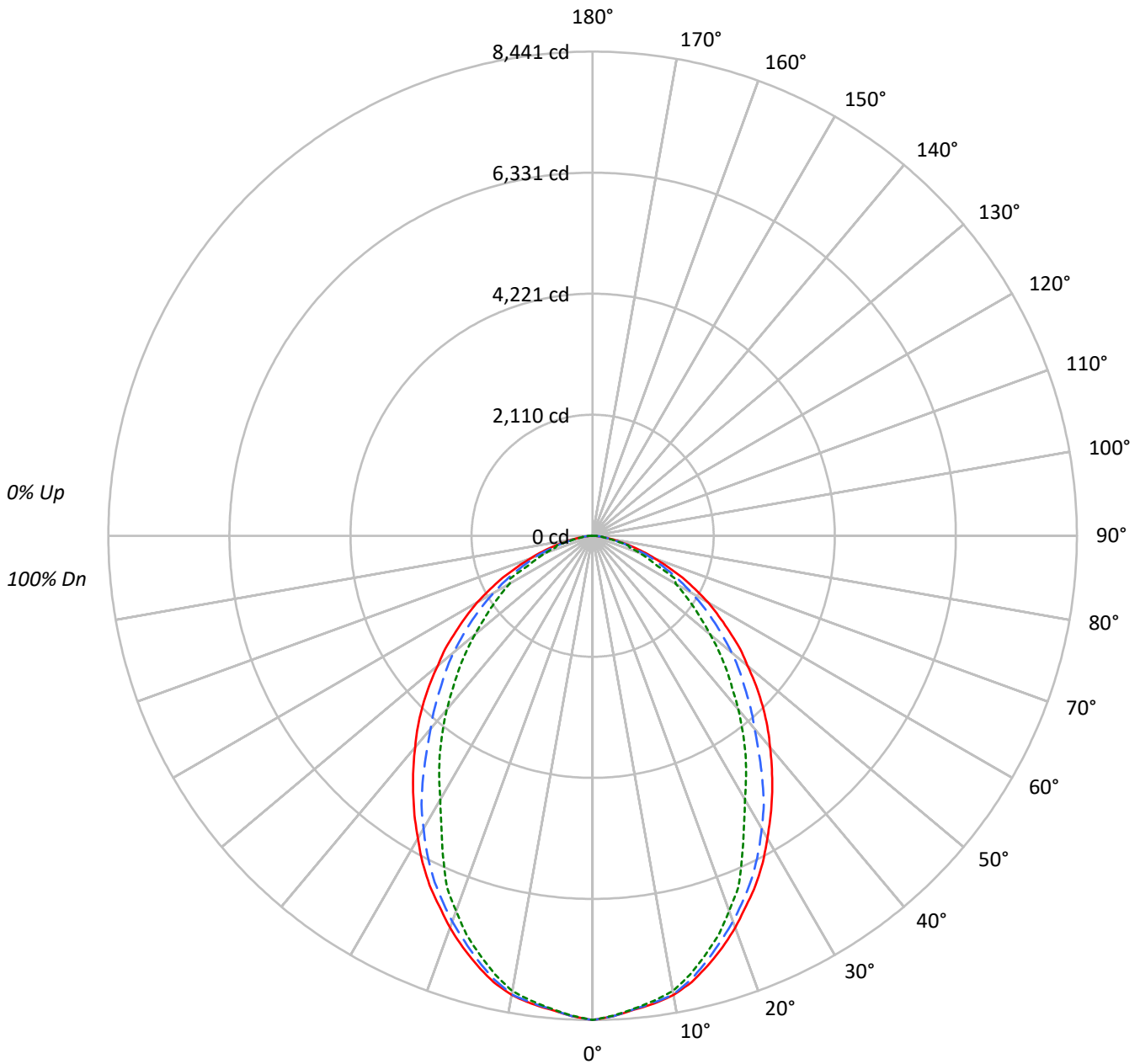
Lumens per Lamp: N/A
Luminaire Lumens: 16571.0 lumens
Efficiency: N/A
Efficacy: 95.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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				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°	11357	11357	11357
5°	11203	11190	11177
10°	11106	11093	11013
15°	10807	10698	10548
20°	10409	10242	9962
25°	9982	9764	9156
30°	9461	9157	8248
35°	8960	8463	7630
40°	8450	7713	6942
45°	7966	7130	6276
50°	7374	6618	5597
55°	6822	5997	5013
60°	6250	5357	4490
65°	5499	4691	3977
70°	4530	4108	3378
75°	3602	3145	3297
80°	2420	2269	2117
85°	1507	1808	2109



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	785.7	4.7
10°-20°	2156.4	13.0
20°-30°	2985.4	18.0
30°-40°	3183.3	19.2
40°-50°	2904.1	17.5
50°-60°	2275.1	13.7
60°-70°	1482.8	8.9
70°-80°	657.0	4.0
80°-90°	141.1	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°	5927.6	35.8
0°-40°	9110.9	55.0
0°-60°	14290.2	86.2
0°-90°	16571.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16571.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8441	8441	8441	8441	8441	
5°	8295	8285	8285	8275	8275	787
15°	7758	7758	7680	7602	7572	2181
25°	6724	6684	6577	6343	6167	3087
35°	5455	5416	5152	4762	4645	3410
45°	4186	4098	3747	3435	3298	3225
55°	2908	2820	2557	2254	2137	2608
65°	1727	1630	1474	1503	1249	1702
75°	693	644	605	576	634	743
85°	98	107	117	127	137	135
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8441.0	8441.0	8441.0	8441.0	8441.0
2.5°	8382.5	8382.5	8382.5	8372.7	8372.7
5°	8294.7	8284.9	8284.9	8275.2	8275.2
7.5°	8226.4	8216.6	8206.8	8197.1	8177.6
10°	8128.8	8128.8	8119.0	8070.2	8060.5
12.5°	7972.6	7962.9	7923.8	7855.5	7836.0
15°	7758.0	7758.0	7679.9	7601.8	7572.5
17.5°	7523.8	7514.0	7416.4	7338.3	7299.3
20°	7270.0	7250.5	7152.9	7026.1	6957.8
22.5°	6987.0	6987.0	6869.9	6704.0	6635.7
25°	6723.6	6684.5	6577.2	6343.0	6167.3
27.5°	6421.1	6362.5	6245.4	5913.6	5708.7
30°	6089.3	6060.0	5894.1	5464.7	5308.6
32.5°	5777.0	5728.2	5552.5	5103.7	4976.8
35°	5455.0	5415.9	5152.5	4762.1	4645.0
37.5°	5132.9	5084.1	4752.4	4440.1	4293.7
40°	4810.9	4752.4	4391.3	4108.3	3952.2
42.5°	4508.4	4430.3	4079.0	3776.5	3600.9
45°	4186.4	4098.5	3747.2	3435.0	3298.4
47.5°	3864.3	3786.3	3464.2	3142.2	2986.1
50°	3522.8	3454.5	3161.7	2839.7	2673.8
52.5°	3239.8	3132.5	2849.5	2527.4	2390.8
55°	2908.0	2820.2	2556.7	2254.2	2137.1
57.5°	2605.5	2517.7	2273.7	1990.7	1893.1
60°	2322.5	2195.6	1990.7	1746.8	1668.7
62.5°	2010.2	1912.7	1737.0	1532.1	1629.7
65°	1727.2	1629.7	1473.5	1502.8	1249.1
67.5°	1415.0	1366.2	1229.6	1092.9	1053.9
70°	1151.5	1092.9	1044.2	897.8	858.7
72.5°	917.3	858.7	790.4	712.4	683.1
75°	692.8	644.1	605.0	575.7	634.3
77.5°	478.2	458.6	429.4	400.1	390.3
80°	312.3	302.5	292.8	283.0	273.2
82.5°	185.4	185.4	185.4	185.4	185.4
85°	97.6	107.3	117.1	126.9	136.6
87.5°	58.6	58.6	68.3	78.1	87.8
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)