

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: P547318

Luminaire Tested: **FMR-24-4-LD4-4HI-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: P547318
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-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 LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

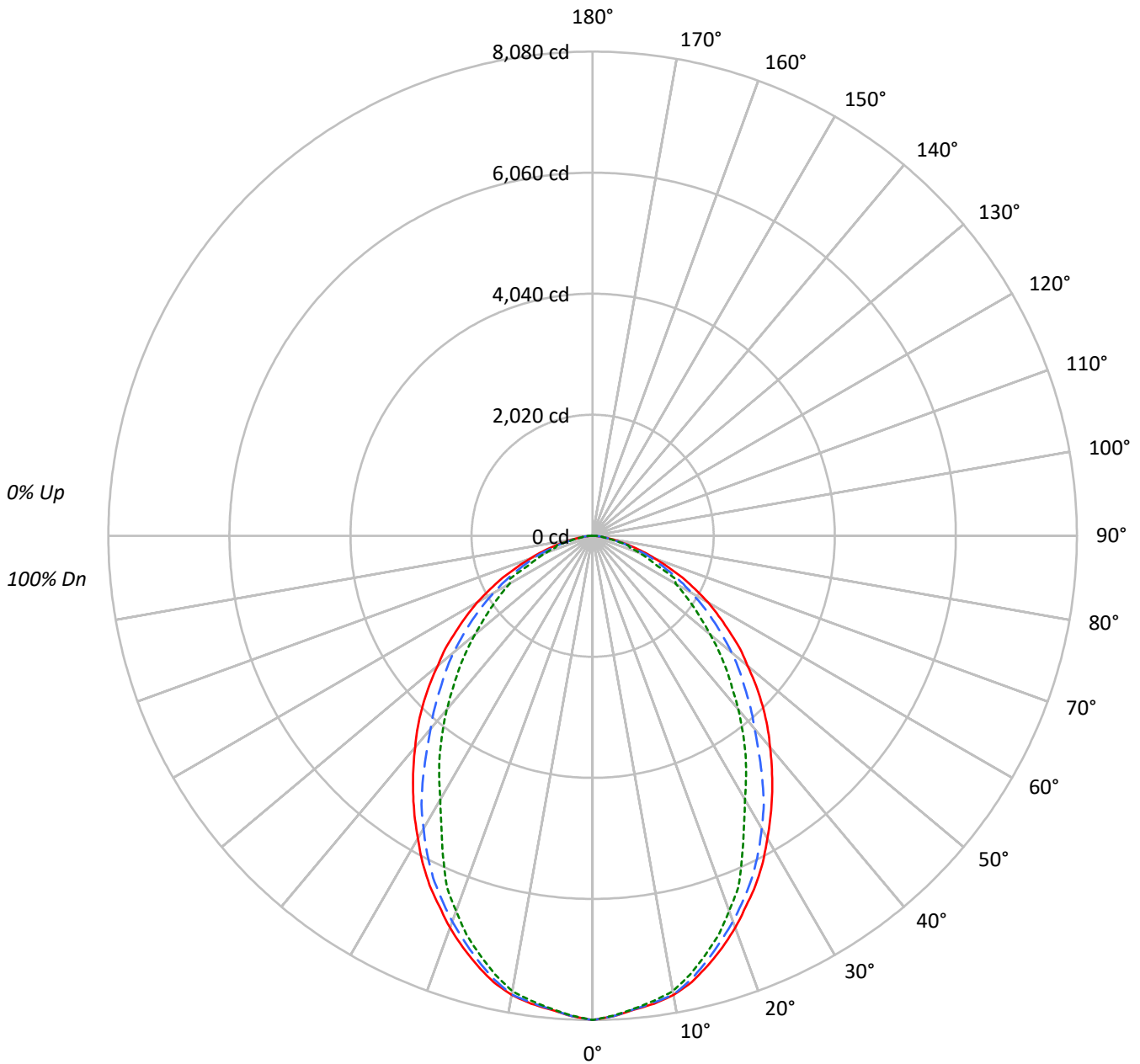
Lumens per Lamp: N/A
Luminaire Lumens: 15863.0 lumens
Efficiency: N/A
Efficacy: 91.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
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°	10872	10872	10872
5°	10724	10712	10699
10°	10631	10619	10542
15°	10345	10241	10098
20°	9965	9804	9537
25°	9555	9347	8765
30°	9056	8766	7895
35°	8577	8101	7304
40°	8089	7383	6645
45°	7626	6826	6008
50°	7059	6335	5358
55°	6530	5741	4799
60°	5983	5128	4299
65°	5264	4491	3807
70°	4336	3932	3234
75°	3448	3011	3157
80°	2316	2171	2027
85°	1442	1731	2019



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	752.2	4.7
10°-20°	2064.3	13.0
20°-30°	2857.9	18.0
30°-40°	3047.3	19.2
40°-50°	2780.0	17.5
50°-60°	2177.9	13.7
60°-70°	1419.5	8.9
70°-80°	628.9	4.0
80°-90°	135.0	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°	5674.3	35.8
0°-40°	8721.6	55.0
0°-60°	13679.6	86.2
0°-90°	15863.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15863.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8080	8080	8080	8080	8080	
5°	7940	7931	7931	7922	7922	754
15°	7426	7426	7352	7277	7249	2088
25°	6436	6399	6296	6072	5904	2955
35°	5222	5184	4932	4559	4447	3265
45°	4008	3923	3587	3288	3157	3087
55°	2784	2700	2448	2158	2046	2497
65°	1653	1560	1411	1439	1196	1629
75°	663	616	579	551	607	711
85°	93	103	112	121	131	130
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8080.4	8080.4	8080.4	8080.4	8080.4
2.5°	8024.4	8024.4	8024.4	8015.0	8015.0
5°	7940.3	7930.9	7930.9	7921.6	7921.6
7.5°	7874.9	7865.5	7856.2	7846.9	7828.2
10°	7781.5	7781.5	7772.1	7725.4	7716.1
12.5°	7632.0	7622.7	7585.3	7519.9	7501.2
15°	7426.5	7426.5	7351.8	7277.0	7249.0
17.5°	7202.3	7193.0	7099.5	7024.8	6987.4
20°	6959.4	6940.7	6847.3	6725.9	6660.5
22.5°	6688.5	6688.5	6576.4	6417.6	6352.2
25°	6436.3	6398.9	6296.2	6072.0	5903.8
27.5°	6146.7	6090.7	5978.6	5661.0	5464.8
30°	5829.1	5801.1	5642.3	5231.2	5081.8
32.5°	5530.2	5483.5	5315.3	4885.6	4764.2
35°	5221.9	5184.5	4932.3	4558.7	4446.6
37.5°	4913.6	4866.9	4549.3	4250.4	4110.3
40°	4605.4	4549.3	4203.7	3932.8	3783.3
42.5°	4315.8	4241.0	3904.7	3615.2	3447.0
45°	4007.5	3923.4	3587.1	3288.2	3157.4
47.5°	3699.2	3624.5	3316.2	3008.0	2858.5
50°	3372.3	3306.9	3026.6	2718.4	2559.6
52.5°	3101.4	2998.6	2727.7	2419.4	2288.7
55°	2783.8	2699.7	2447.5	2157.9	2045.8
57.5°	2494.2	2410.1	2176.6	1905.7	1812.3
60°	2223.3	2101.8	1905.7	1672.1	1597.4
62.5°	1924.3	1830.9	1662.8	1466.6	1560.0
65°	1653.4	1560.0	1410.6	1438.6	1195.7
67.5°	1354.5	1307.8	1177.0	1046.2	1008.9
70°	1102.3	1046.2	999.5	859.4	822.1
72.5°	878.1	822.1	756.7	681.9	653.9
75°	663.2	616.5	579.2	551.1	607.2
77.5°	457.7	439.1	411.0	383.0	373.7
80°	298.9	289.6	280.2	270.9	261.6
82.5°	177.5	177.5	177.5	177.5	177.5
85°	93.4	102.8	112.1	121.4	130.8
87.5°	56.0	56.0	65.4	74.7	84.1
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)