

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: P547293

Luminaire Tested: **FMR-24-4-LD4-4HI-40-UNV-80-96-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: P547293
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-80-96-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

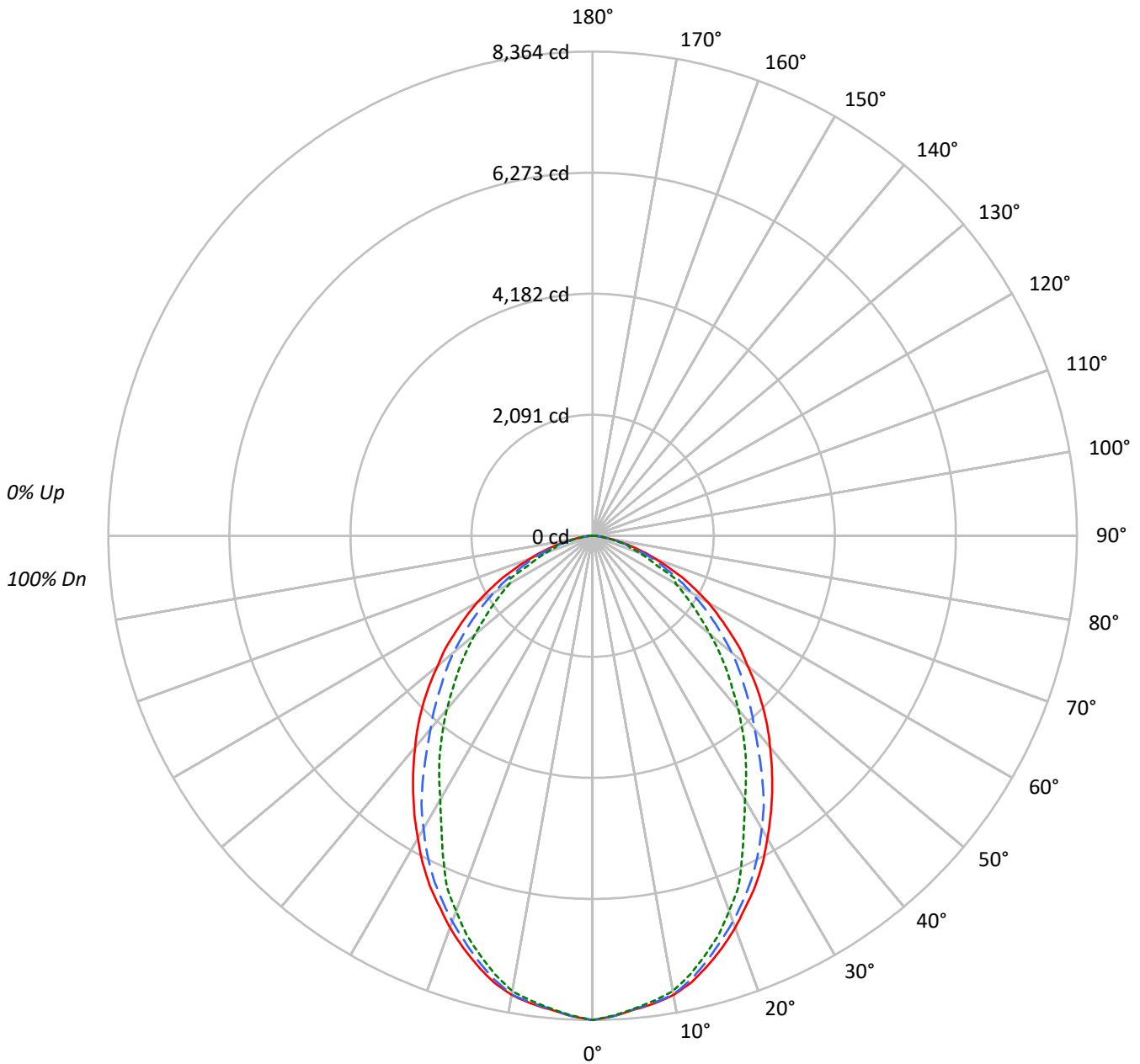
Lumens per Lamp: N/A
Luminaire Lumens: 16420.0 lumens
Efficiency: N/A
Efficacy: 95.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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									
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°	11254	11254	11254
5°	11101	11088	11075
10°	11005	10991	10912
15°	10708	10600	10452
20°	10315	10149	9872
25°	9891	9675	9072
30°	9374	9074	8172
35°	8878	8386	7560
40°	8373	7643	6878
45°	7893	7065	6219
50°	7307	6558	5546
55°	6759	5943	4967
60°	6193	5308	4450
65°	5449	4649	3940
70°	4489	4070	3347
75°	3569	3117	3267
80°	2397	2248	2097
85°	1493	1791	2090



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	778.6	4.7
10°-20°	2136.8	13.0
20°-30°	2958.2	18.0
30°-40°	3154.3	19.2
40°-50°	2877.7	17.5
50°-60°	2254.4	13.7
60°-70°	1469.3	8.9
70°-80°	651.0	4.0
80°-90°	139.8	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°	5873.6	35.8
0°-40°	9027.9	55.0
0°-60°	14160.0	86.2
0°-90°	16420.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16420.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8364	8364	8364	8364	8364	
5°	8219	8209	8209	8200	8200	780
15°	7687	7687	7610	7533	7504	2161
25°	6662	6624	6517	6285	6111	3059
35°	5405	5367	5106	4719	4603	3379
45°	4148	4061	3713	3404	3268	3195
55°	2882	2794	2533	2234	2118	2585
65°	1712	1615	1460	1489	1238	1687
75°	686	638	600	570	628	736
85°	97	106	116	126	135	134
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8364.1	8364.1	8364.1	8364.1	8364.1
2.5°	8306.1	8306.1	8306.1	8296.4	8296.4
5°	8219.1	8209.4	8209.4	8199.7	8199.7
7.5°	8151.4	8141.7	8132.1	8122.4	8103.1
10°	8054.7	8054.7	8045.0	7996.7	7987.0
12.5°	7900.0	7890.3	7851.6	7784.0	7764.6
15°	7687.3	7687.3	7609.9	7532.6	7503.5
17.5°	7455.2	7445.5	7348.8	7271.5	7232.8
20°	7203.8	7184.4	7087.8	6962.0	6894.4
22.5°	6923.4	6923.4	6807.3	6643.0	6575.3
25°	6662.3	6623.6	6517.3	6285.2	6111.1
27.5°	6362.5	6304.5	6188.5	5859.7	5656.7
30°	6033.8	6004.8	5840.4	5414.9	5260.2
32.5°	5724.4	5676.0	5502.0	5057.2	4931.5
35°	5405.3	5366.6	5105.5	4718.7	4602.7
37.5°	5086.2	5037.8	4709.1	4399.6	4254.6
40°	4767.1	4709.1	4351.3	4070.9	3916.2
42.5°	4467.3	4390.0	4041.9	3742.1	3568.1
45°	4148.2	4061.2	3713.1	3403.7	3268.3
47.5°	3829.1	3751.8	3432.7	3113.6	2958.9
50°	3490.7	3423.0	3132.9	2813.8	2649.4
52.5°	3210.3	3103.9	2823.5	2504.4	2369.0
55°	2881.5	2794.5	2533.4	2233.7	2117.6
57.5°	2581.8	2494.7	2253.0	1972.6	1875.9
60°	2301.3	2175.6	1972.6	1730.8	1653.5
62.5°	1991.9	1895.2	1721.2	1518.1	1614.8
65°	1711.5	1614.8	1460.1	1489.1	1237.7
67.5°	1402.1	1353.7	1218.4	1083.0	1044.3
70°	1141.0	1083.0	1034.6	889.6	850.9
72.5°	908.9	850.9	783.2	705.9	676.9
75°	686.5	638.2	599.5	570.5	628.5
77.5°	473.8	454.5	425.5	396.5	386.8
80°	309.4	299.8	290.1	280.4	270.7
82.5°	183.7	183.7	183.7	183.7	183.7
85°	96.7	106.4	116.0	125.7	135.4
87.5°	58.0	58.0	67.7	77.4	87.0
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)