

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: P547227

Luminaire Tested: **FMR-24-4-LD4-3STD-50-UNV-80-88-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: P547227
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-LD4-3STD-50-UNV-80-88-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

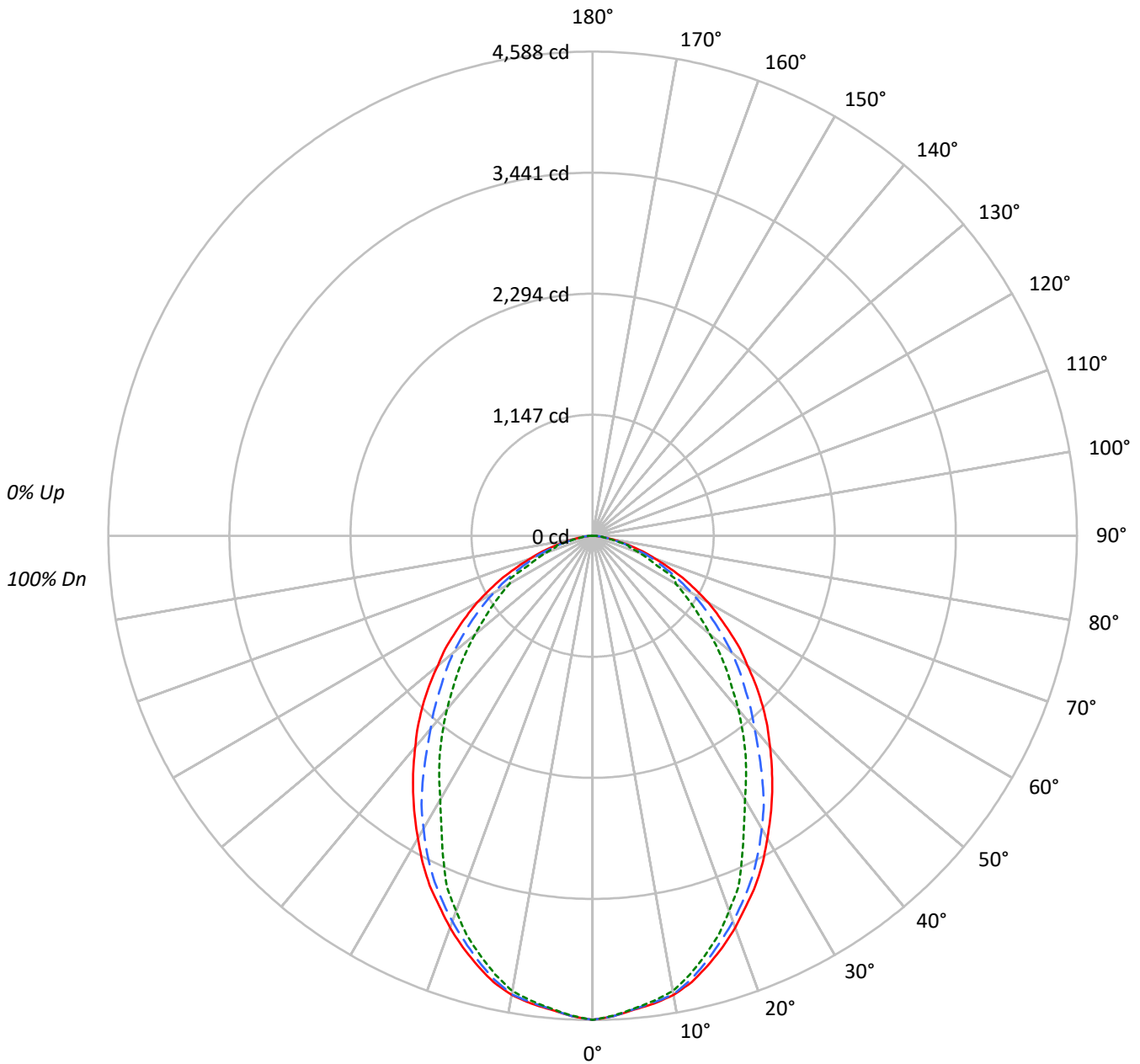
Lumens per Lamp: N/A
Luminaire Lumens: 9006.0 lumens
Efficiency: N/A
Efficacy: 90.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	6172	6172	6172
5°	6089	6081	6074
10°	6036	6029	5985
15°	5873	5814	5733
20°	5657	5566	5414
25°	5425	5307	4976
30°	5142	4977	4482
35°	4870	4600	4147
40°	4592	4192	3773
45°	4329	3875	3411
50°	4008	3597	3042
55°	3707	3259	2725
60°	3397	2911	2440
65°	2989	2550	2161
70°	2462	2233	1836
75°	1957	1709	1792
80°	1315	1233	1151
85°	818	982	1145



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	427.0	4.7
10°-20°	1172.0	13.0
20°-30°	1622.5	18.0
30°-40°	1730.1	19.2
40°-50°	1578.3	17.5
50°-60°	1236.5	13.7
60°-70°	805.9	8.9
70°-80°	357.0	4.0
80°-90°	76.6	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°	3221.5	35.8
0°-40°	4951.6	55.0
0°-60°	7766.4	86.2
0°-90°	9006.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9006.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4588	4588	4588	4588	4588	
5°	4508	4503	4503	4497	4497	428
15°	4216	4216	4174	4131	4116	1185
25°	3654	3633	3575	3447	3352	1678
35°	2965	2943	2800	2588	2524	1853
45°	2275	2228	2036	1867	1793	1753
55°	1580	1533	1390	1225	1162	1418
65°	939	886	801	817	679	925
75°	376	350	329	313	345	404
85°	53	58	64	69	74	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4587.5	4587.5	4587.5	4587.5	4587.5
2.5°	4555.7	4555.7	4555.7	4550.4	4550.4
5°	4508.0	4502.7	4502.7	4497.4	4497.4
7.5°	4470.9	4465.6	4460.3	4454.9	4444.3
10°	4417.8	4417.8	4412.5	4386.0	4380.7
12.5°	4333.0	4327.7	4306.5	4269.3	4258.7
15°	4216.3	4216.3	4173.9	4131.4	4115.5
17.5°	4089.0	4083.7	4030.7	3988.2	3967.0
20°	3951.1	3940.5	3887.5	3818.5	3781.4
22.5°	3797.3	3797.3	3733.7	3643.5	3606.4
25°	3654.1	3632.9	3574.6	3447.3	3351.8
27.5°	3489.7	3457.9	3394.2	3213.9	3102.6
30°	3309.4	3293.5	3203.3	2970.0	2885.1
32.5°	3139.7	3113.2	3017.7	2773.7	2704.8
35°	2964.7	2943.4	2800.3	2588.1	2524.5
37.5°	2789.6	2763.1	2582.8	2413.1	2333.5
40°	2614.6	2582.8	2386.6	2232.8	2147.9
42.5°	2450.2	2407.8	2216.9	2052.5	1957.0
45°	2275.2	2227.5	2036.5	1866.8	1792.6
47.5°	2100.2	2057.8	1882.7	1707.7	1622.9
50°	1914.6	1877.4	1718.3	1543.3	1453.2
52.5°	1760.8	1702.4	1548.6	1373.6	1299.4
55°	1580.4	1532.7	1389.5	1225.1	1161.5
57.5°	1416.0	1368.3	1235.7	1081.9	1028.9
60°	1262.2	1193.3	1081.9	949.3	906.9
62.5°	1092.5	1039.5	944.0	832.7	885.7
65°	938.7	885.7	800.8	816.7	678.8
67.5°	769.0	742.5	668.2	594.0	572.8
70°	625.8	594.0	567.5	487.9	466.7
72.5°	498.5	466.7	429.6	387.2	371.2
75°	376.5	350.0	328.8	312.9	344.7
77.5°	259.9	249.3	233.4	217.4	212.1
80°	169.7	164.4	159.1	153.8	148.5
82.5°	100.8	100.8	100.8	100.8	100.8
85°	53.0	58.3	63.6	68.9	74.2
87.5°	31.8	31.8	37.1	42.4	47.7
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)