

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: P547453

Luminaire Tested: **FMR-24-4-LD4-4STD-35-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: P547453
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-LD4-4STD-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

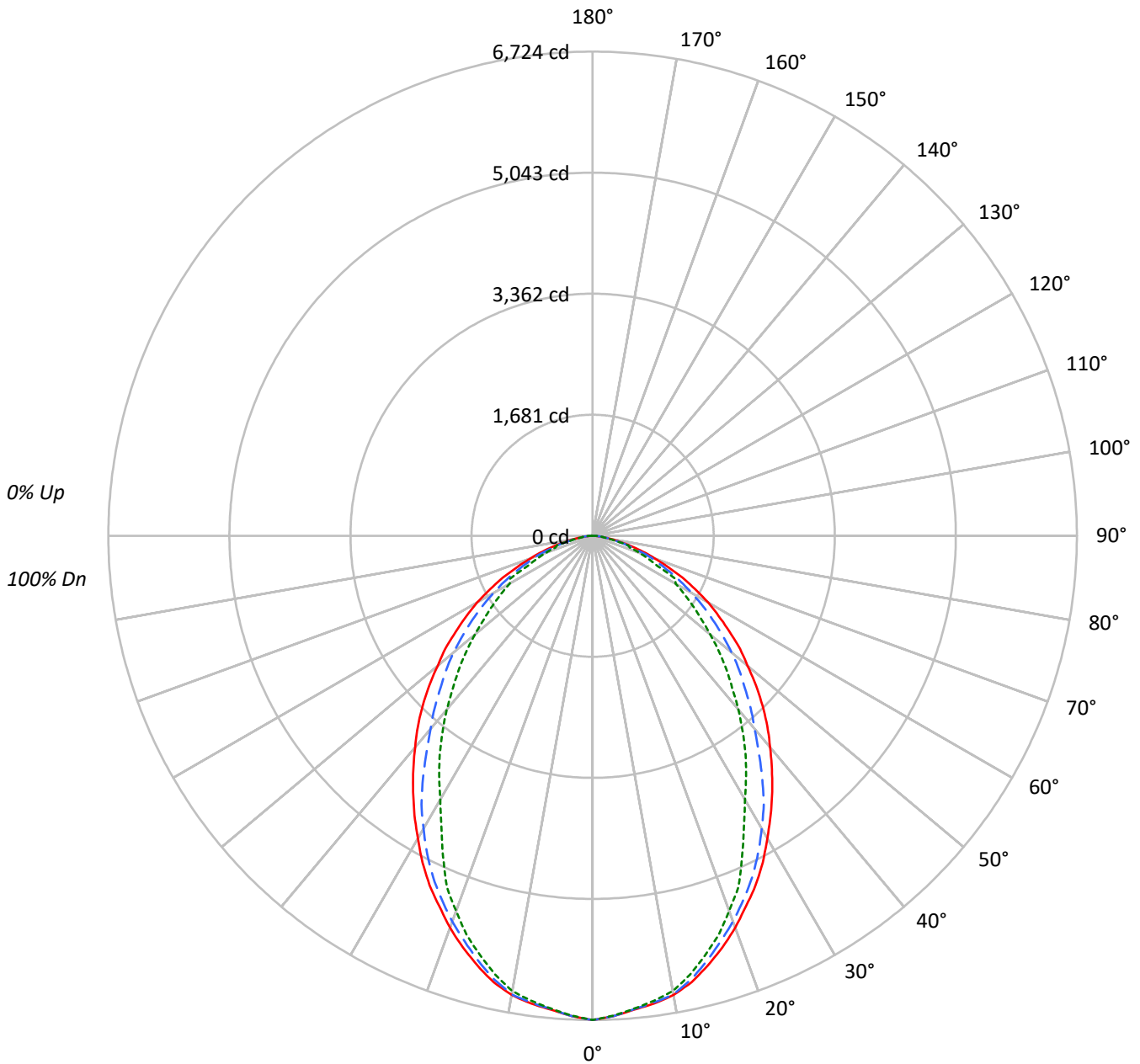
Lumens per Lamp: N/A
Luminaire Lumens: 13200.0 lumens
Efficiency: N/A
Efficacy: 99.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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°	9047	9047	9047
5°	8924	8913	8903
10°	8847	8836	8772
15°	8608	8522	8402
20°	8292	8158	7936
25°	7951	7778	7293
30°	7536	7294	6570
35°	7137	6741	6078
40°	6731	6144	5530
45°	6345	5680	4999
50°	5874	5272	4458
55°	5434	4777	3993
60°	4978	4267	3577
65°	4380	3737	3168
70°	3608	3272	2691
75°	2869	2505	2627
80°	1927	1807	1687
85°	1200	1440	1680



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	625.9	4.7
10°-20°	1717.7	13.0
20°-30°	2378.1	18.0
30°-40°	2535.8	19.2
40°-50°	2313.3	17.5
50°-60°	1812.3	13.7
60°-70°	1181.2	8.9
70°-80°	523.3	4.0
80°-90°	112.4	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°	4721.7	35.8
0°-40°	7257.5	55.0
0°-60°	11383.1	86.2
0°-90°	13200.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13200.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6724	6724	6724	6724	6724	
5°	6607	6600	6600	6592	6592	627
15°	6180	6180	6118	6055	6032	1737
25°	5356	5325	5239	5053	4913	2459
35°	4345	4314	4104	3793	3700	2717
45°	3335	3265	2985	2736	2627	2569
55°	2316	2246	2037	1796	1702	2078
65°	1376	1298	1174	1197	995	1356
75°	552	513	482	459	505	591
85°	78	86	93	101	109	108
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6723.9	6723.9	6723.9	6723.9	6723.9
2.5°	6677.3	6677.3	6677.3	6669.5	6669.5
5°	6607.3	6599.5	6599.5	6591.8	6591.8
7.5°	6552.9	6545.1	6537.3	6529.6	6514.0
10°	6475.2	6475.2	6467.4	6428.5	6420.7
12.5°	6350.8	6343.0	6311.9	6257.5	6242.0
15°	6179.8	6179.8	6117.6	6055.4	6032.1
17.5°	5993.2	5985.4	5907.7	5845.5	5814.4
20°	5791.1	5775.6	5697.8	5596.8	5542.4
22.5°	5565.7	5565.7	5472.4	5340.3	5285.8
25°	5355.8	5324.7	5239.2	5052.6	4912.7
27.5°	5114.8	5068.2	4974.9	4710.6	4547.4
30°	4850.5	4827.2	4695.1	4353.0	4228.7
32.5°	4601.8	4562.9	4423.0	4065.4	3964.4
35°	4345.3	4314.2	4104.3	3793.4	3700.1
37.5°	4088.8	4049.9	3785.6	3536.9	3420.3
40°	3832.2	3785.6	3498.0	3272.6	3148.2
42.5°	3591.3	3529.1	3249.2	3008.3	2868.3
45°	3334.7	3264.8	2984.9	2736.2	2627.4
47.5°	3078.2	3016.0	2759.5	2503.0	2378.6
50°	2806.2	2751.7	2518.5	2262.0	2129.9
52.5°	2580.7	2495.2	2269.8	2013.3	1904.5
55°	2316.4	2246.5	2036.6	1795.6	1702.4
57.5°	2075.5	2005.5	1811.2	1585.8	1508.0
60°	1850.0	1749.0	1585.8	1391.4	1329.2
62.5°	1601.3	1523.6	1383.6	1220.4	1298.1
65°	1375.9	1298.1	1173.8	1197.1	995.0
67.5°	1127.1	1088.3	979.4	870.6	839.5
70°	917.2	870.6	831.7	715.1	684.1
72.5°	730.7	684.1	629.6	567.5	544.1
75°	551.9	513.0	481.9	458.6	505.3
77.5°	380.9	365.3	342.0	318.7	310.9
80°	248.7	241.0	233.2	225.4	217.7
82.5°	147.7	147.7	147.7	147.7	147.7
85°	77.7	85.5	93.3	101.1	108.8
87.5°	46.6	46.6	54.4	62.2	70.0
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)