

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: P547478

Luminaire Tested: **FMR-24-4-LD4-4STD-35-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: P547478
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-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

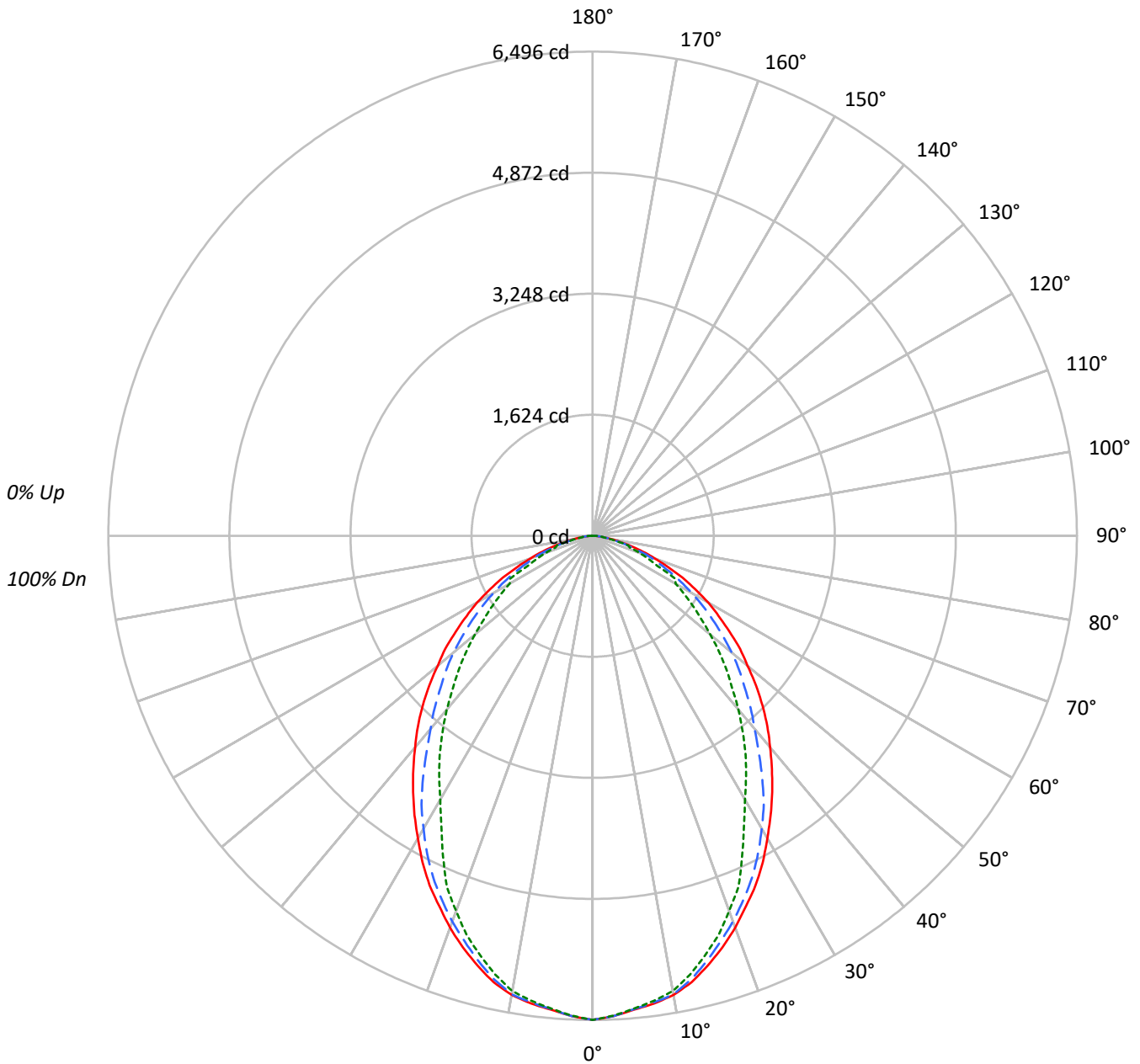
Lumens per Lamp: N/A
Luminaire Lumens: 12752.0 lumens
Efficiency: N/A
Efficacy: 95.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
Input Voltage (V): NR
Input Current (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°	8740	8740	8740
5°	8621	8611	8601
10°	8546	8536	8475
15°	8316	8232	8117
20°	8011	7881	7667
25°	7681	7514	7046
30°	7280	7047	6347
35°	6895	6513	5871
40°	6503	5935	5342
45°	6130	5487	4830
50°	5674	5093	4307
55°	5249	4615	3858
60°	4810	4122	3455
65°	4232	3610	3060
70°	3486	3161	2600
75°	2772	2420	2537
80°	1862	1746	1629
85°	1159	1391	1623



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	604.7	4.7
10°-20°	1659.4	13.0
20°-30°	2297.4	18.0
30°-40°	2449.7	19.2
40°-50°	2234.8	17.5
50°-60°	1750.8	13.7
60°-70°	1141.1	8.9
70°-80°	505.6	4.0
80°-90°	108.6	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°	4561.5	35.8
0°-40°	7011.2	55.0
0°-60°	10996.8	86.2
0°-90°	12752.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12752.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6496	6496	6496	6496	6496	
5°	6383	6376	6376	6368	6368	606
15°	5970	5970	5910	5850	5827	1678
25°	5174	5144	5061	4881	4746	2375
35°	4198	4168	3965	3665	3574	2624
45°	3222	3154	2884	2643	2538	2482
55°	2238	2170	1968	1735	1645	2007
65°	1329	1254	1134	1156	961	1310
75°	533	496	466	443	488	571
85°	75	83	90	98	105	104
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6495.7	6495.7	6495.7	6495.7	6495.7
2.5°	6450.6	6450.6	6450.6	6443.1	6443.1
5°	6383.1	6375.5	6375.5	6368.0	6368.0
7.5°	6330.5	6323.0	6315.5	6308.0	6292.9
10°	6255.4	6255.4	6247.9	6210.3	6202.8
12.5°	6135.2	6127.7	6097.7	6045.1	6030.1
15°	5970.0	5970.0	5910.0	5849.9	5827.4
17.5°	5789.8	5782.3	5707.2	5647.1	5617.1
20°	5594.6	5579.5	5504.4	5406.8	5354.3
22.5°	5376.8	5376.8	5286.7	5159.0	5106.4
25°	5174.0	5144.0	5061.4	4881.2	4746.0
27.5°	4941.2	4896.2	4806.1	4550.7	4393.0
30°	4685.9	4663.4	4535.7	4205.3	4085.2
32.5°	4445.6	4408.1	4272.9	3927.5	3829.8
35°	4197.8	4167.8	3965.0	3664.6	3574.5
37.5°	3950.0	3912.4	3657.1	3416.8	3304.2
40°	3702.2	3657.1	3379.3	3161.5	3041.3
42.5°	3469.4	3409.3	3139.0	2906.2	2771.0
45°	3221.6	3154.0	2883.6	2643.3	2538.2
47.5°	2973.8	2913.7	2665.9	2418.1	2297.9
50°	2710.9	2658.4	2433.1	2185.3	2057.6
52.5°	2493.1	2410.5	2192.8	1945.0	1839.8
55°	2237.8	2170.2	1967.5	1734.7	1644.6
57.5°	2005.0	1937.4	1749.7	1531.9	1456.8
60°	1787.3	1689.6	1531.9	1344.2	1284.1
62.5°	1547.0	1471.9	1336.7	1179.0	1254.1
65°	1329.2	1254.1	1133.9	1156.5	961.2
67.5°	1088.9	1051.3	946.2	841.1	811.0
70°	886.1	841.1	803.5	690.9	660.8
72.5°	705.9	660.8	608.3	548.2	525.7
75°	533.2	495.6	465.6	443.1	488.1
77.5°	368.0	352.9	330.4	307.9	300.4
80°	240.3	232.8	225.3	217.8	210.3
82.5°	142.7	142.7	142.7	142.7	142.7
85°	75.1	82.6	90.1	97.6	105.1
87.5°	45.1	45.1	52.6	60.1	67.6
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)