

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: P547475

Luminaire Tested: **FMR-24-4-LD4-4STD-35-UNV-93-88-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: P547475
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-93-88-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

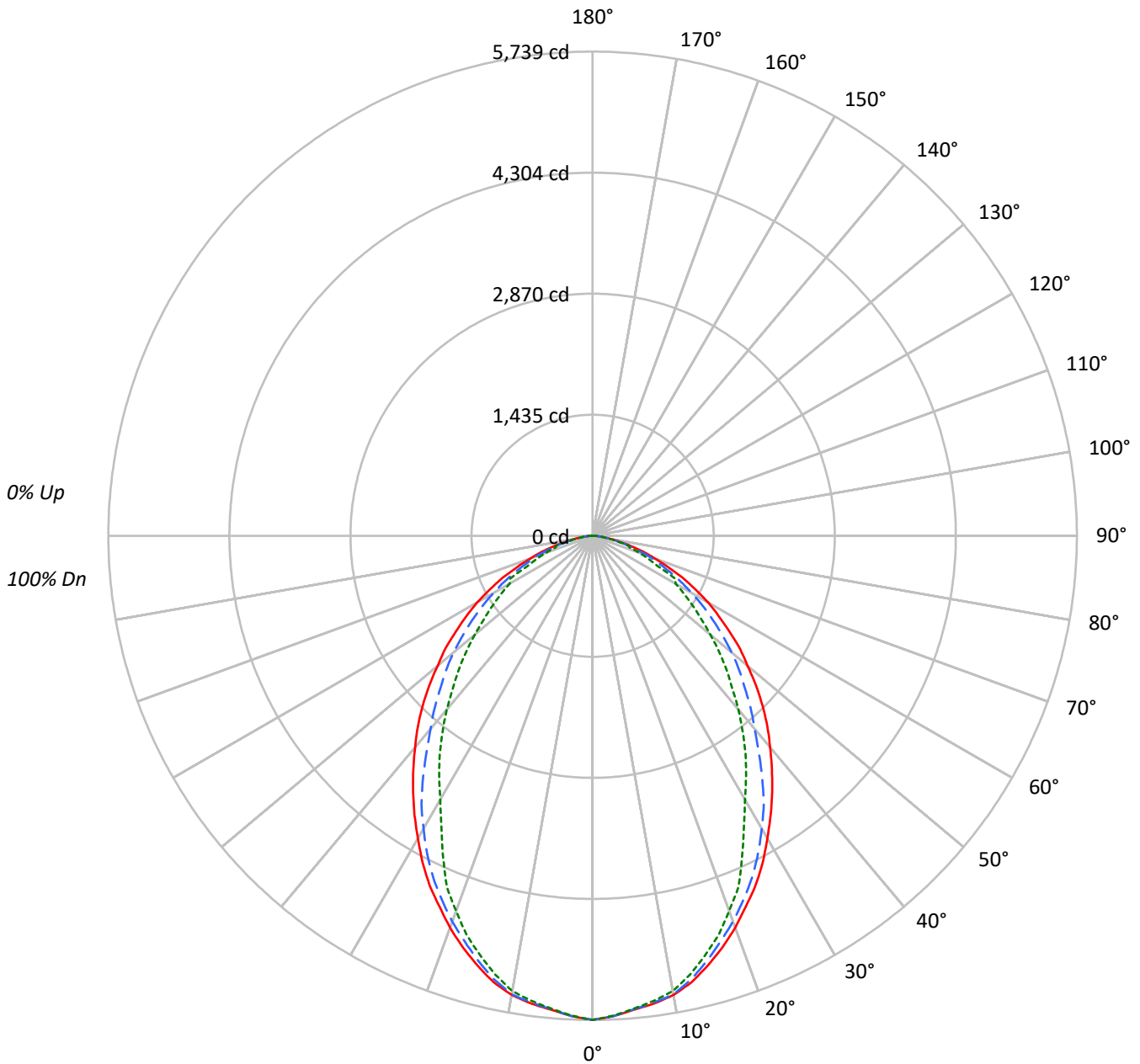
Lumens per Lamp: N/A
Luminaire Lumens: 11266.0 lumens
Efficiency: N/A
Efficacy: 84.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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				20				20	
RC	80				70				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				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7721	7721	7721
5°	7616	7608	7599
10°	7550	7541	7487
15°	7347	7273	7171
20°	7077	6963	6773
25°	6786	6638	6225
30°	6432	6226	5607
35°	6092	5754	5187
40°	5745	5244	4719
45°	5416	4848	4267
50°	5013	4499	3805
55°	4638	4077	3408
60°	4249	3642	3053
65°	3739	3189	2704
70°	3080	2793	2297
75°	2449	2138	2242
80°	1645	1542	1440
85°	1024	1229	1434



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	534.2	4.7
10°-20°	1466.1	13.0
20°-30°	2029.7	18.0
30°-40°	2164.2	19.2
40°-50°	1974.4	17.5
50°-60°	1546.8	13.7
60°-70°	1008.1	8.9
70°-80°	446.6	4.0
80°-90°	95.9	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°	4029.9	35.8
0°-40°	6194.2	55.0
0°-60°	9715.3	86.2
0°-90°	11266.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11266.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5739	5739	5739	5739	5739	
5°	5639	5633	5633	5626	5626	535
15°	5274	5274	5221	5168	5148	1483
25°	4571	4545	4472	4312	4193	2099
35°	3709	3682	3503	3238	3158	2319
45°	2846	2786	2548	2335	2242	2192
55°	1977	1917	1738	1532	1453	1773
65°	1174	1108	1002	1022	849	1157
75°	471	438	411	391	431	505
85°	66	73	80	86	93	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5738.7	5738.7	5738.7	5738.7	5738.7
2.5°	5698.9	5698.9	5698.9	5692.3	5692.3
5°	5639.2	5632.6	5632.6	5626.0	5626.0
7.5°	5592.8	5586.2	5579.5	5572.9	5559.6
10°	5526.4	5526.4	5519.8	5486.6	5480.0
12.5°	5420.3	5413.7	5387.1	5340.7	5327.4
15°	5274.3	5274.3	5221.3	5168.2	5148.3
17.5°	5115.1	5108.5	5042.1	4989.1	4962.5
20°	4942.6	4929.4	4863.0	4776.8	4730.3
22.5°	4750.2	4750.2	4670.6	4557.8	4511.4
25°	4571.1	4544.6	4471.6	4312.4	4192.9
27.5°	4365.4	4325.6	4246.0	4020.4	3881.1
30°	4139.9	4120.0	4007.2	3715.3	3609.1
32.5°	3927.6	3894.4	3775.0	3469.8	3383.5
35°	3708.6	3682.1	3503.0	3237.6	3158.0
37.5°	3489.7	3456.5	3230.9	3018.6	2919.1
40°	3270.8	3230.9	2985.5	2793.1	2686.9
42.5°	3065.1	3012.0	2773.2	2567.5	2448.1
45°	2846.2	2786.4	2547.6	2335.3	2242.4
47.5°	2627.2	2574.1	2355.2	2136.3	2030.1
50°	2395.0	2348.6	2149.5	1930.6	1817.8
52.5°	2202.6	2129.6	1937.2	1718.3	1625.4
55°	1977.0	1917.3	1738.2	1532.5	1452.9
57.5°	1771.4	1711.7	1545.8	1353.4	1287.1
60°	1579.0	1492.7	1353.4	1187.6	1134.5
62.5°	1366.7	1300.3	1180.9	1041.6	1107.9
65°	1174.3	1107.9	1001.8	1021.7	849.2
67.5°	962.0	928.8	835.9	743.1	716.5
70°	782.9	743.1	709.9	610.4	583.8
72.5°	623.6	583.8	537.4	484.3	464.4
75°	471.0	437.9	411.3	391.4	431.2
77.5°	325.1	311.8	291.9	272.0	265.4
80°	212.3	205.7	199.0	192.4	185.8
82.5°	126.1	126.1	126.1	126.1	126.1
85°	66.3	73.0	79.6	86.2	92.9
87.5°	39.8	39.8	46.4	53.1	59.7
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)