

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: P545803

Luminaire Tested: **FMR-12-2-LD4-2STD-50-UNV-82-88-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: P545803
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-12-2-LD4-2STD-50-UNV-82-88-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC 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

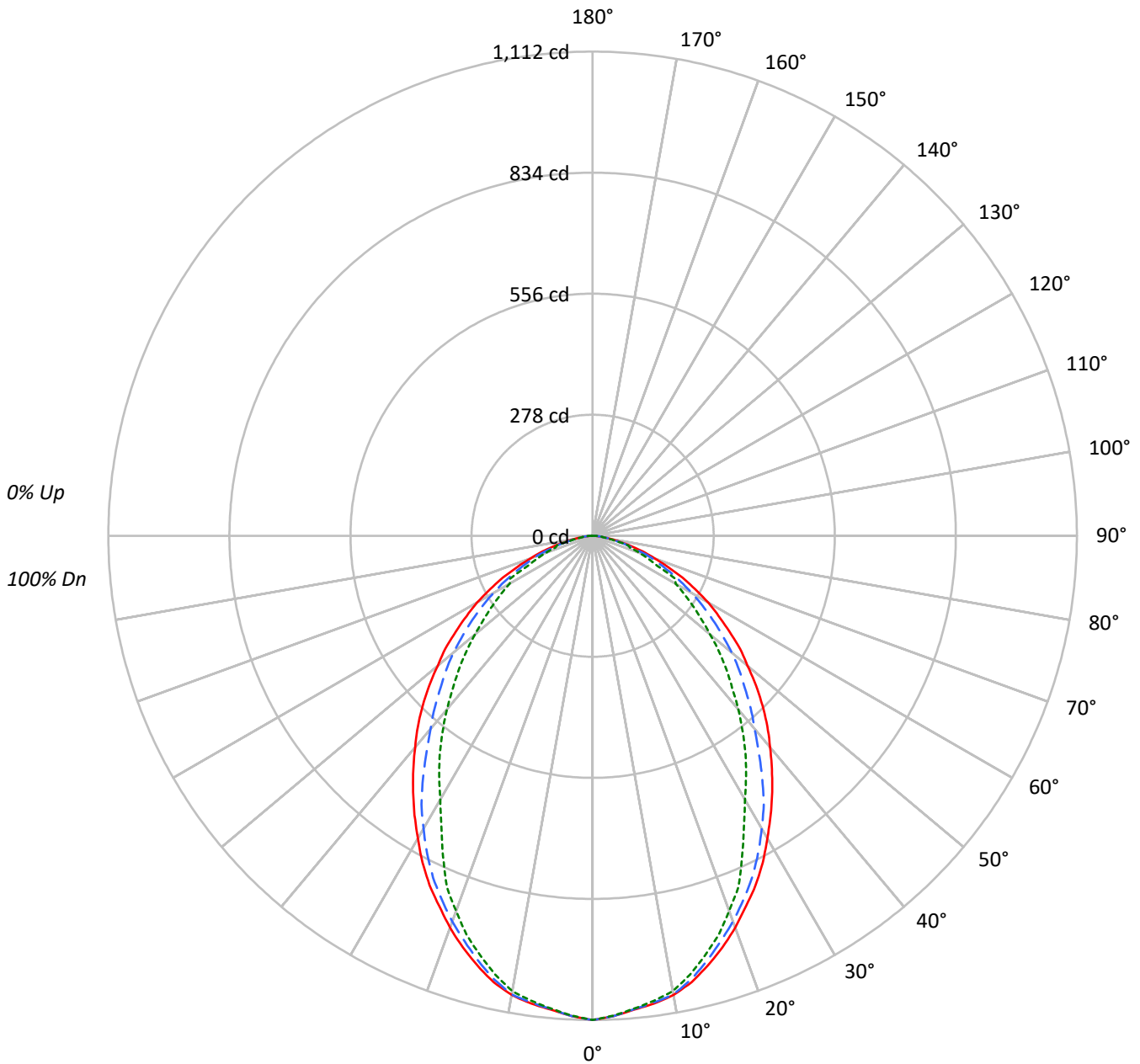
Lumens per Lamp: N/A
Luminaire Lumens: 2183.0 lumens
Efficiency: N/A
Efficacy: 65.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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°	5985	5985	5985
5°	5903	5896	5889
10°	5852	5845	5803
15°	5694	5637	5558
20°	5485	5397	5250
25°	5260	5146	4825
30°	4985	4826	4346
35°	4721	4460	4020
40°	4453	4064	3658
45°	4198	3757	3307
50°	3886	3487	2949
55°	3595	3160	2641
60°	3294	2822	2366
65°	2897	2472	2095
70°	2387	2165	1780
75°	1899	1657	1738
80°	1274	1196	1116
85°	797	951	1112



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.5	4.7
10°-20°	284.1	13.0
20°-30°	393.3	18.0
30°-40°	419.4	19.2
40°-50°	382.6	17.5
50°-60°	299.7	13.7
60°-70°	195.3	8.9
70°-80°	86.5	4.0
80°-90°	18.6	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°	780.9	35.8
0°-40°	1200.2	55.0
0°-60°	1882.5	86.2
0°-90°	2183.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2183.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1112	1112	1112	1112	1112	
5°	1093	1091	1091	1090	1090	104
15°	1022	1022	1012	1001	998	287
25°	886	881	866	836	812	407
35°	719	714	679	627	612	449
45°	552	540	494	452	434	425
55°	383	372	337	297	282	344
65°	228	215	194	198	164	224
75°	91	85	80	76	84	98
85°	13	14	15	17	18	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1112.0	1112.0	1112.0	1112.0	1112.0
2.5°	1104.3	1104.3	1104.3	1103.0	1103.0
5°	1092.7	1091.4	1091.4	1090.1	1090.1
7.5°	1083.7	1082.4	1081.1	1079.9	1077.3
10°	1070.9	1070.9	1069.6	1063.1	1061.9
12.5°	1050.3	1049.0	1043.9	1034.9	1032.3
15°	1022.0	1022.0	1011.7	1001.4	997.6
17.5°	991.2	989.9	977.0	966.7	961.6
20°	957.7	955.2	942.3	925.6	916.6
22.5°	920.4	920.4	905.0	883.2	874.2
25°	885.7	880.6	866.5	835.6	812.5
27.5°	845.9	838.2	822.7	779.0	752.0
30°	802.2	798.3	776.5	719.9	699.3
32.5°	761.0	754.6	731.5	672.3	655.6
35°	718.6	713.5	678.8	627.3	611.9
37.5°	676.2	669.8	626.1	584.9	565.6
40°	633.8	626.1	578.5	541.2	520.6
42.5°	593.9	583.6	537.4	497.5	474.4
45°	551.5	539.9	493.6	452.5	434.5
47.5°	509.1	498.8	456.4	413.9	393.4
50°	464.1	455.1	416.5	374.1	352.2
52.5°	426.8	412.7	375.4	333.0	315.0
55°	383.1	371.5	336.8	297.0	281.5
57.5°	343.2	331.7	299.5	262.2	249.4
60°	306.0	289.2	262.2	230.1	219.8
62.5°	264.8	252.0	228.8	201.8	214.7
65°	227.5	214.7	194.1	198.0	164.5
67.5°	186.4	180.0	162.0	144.0	138.8
70°	151.7	144.0	137.6	118.3	113.1
72.5°	120.8	113.1	104.1	93.8	90.0
75°	91.3	84.8	79.7	75.8	83.6
77.5°	63.0	60.4	56.6	52.7	51.4
80°	41.1	39.9	38.6	37.3	36.0
82.5°	24.4	24.4	24.4	24.4	24.4
85°	12.9	14.1	15.4	16.7	18.0
87.5°	7.7	7.7	9.0	10.3	11.6
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)