

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: P545523

Luminaire Tested: **FMR-12-2-LD4-1STD-50-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: P545523
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-LD4-1STD-50-UNV-93-88-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

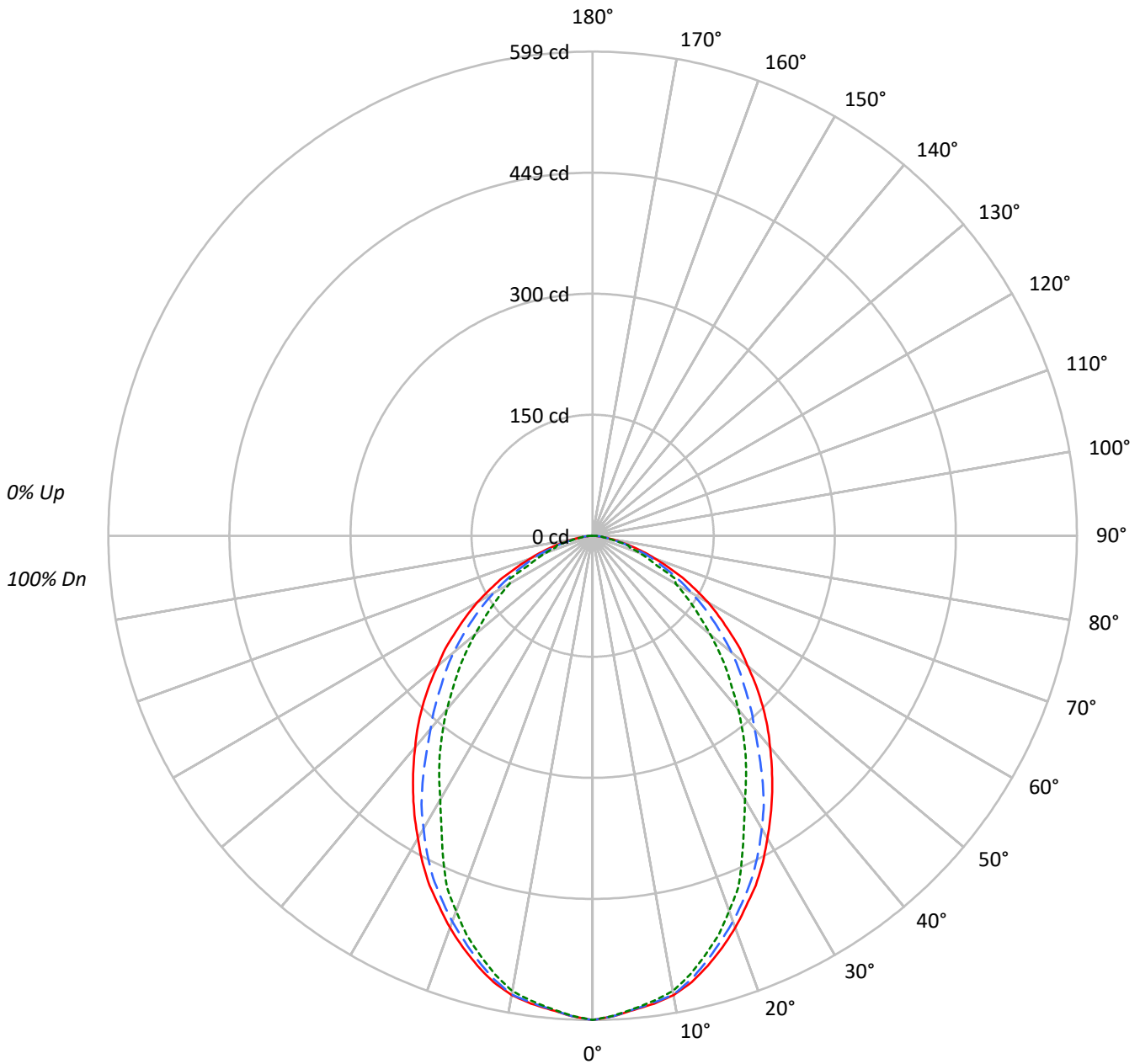
Lumens per Lamp: N/A
Luminaire Lumens: 1176.0 lumens
Efficiency: N/A
Efficacy: 70.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
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	100	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3224	3224	3224
5°	3180	3177	3173
10°	3153	3149	3126
15°	3068	3037	2994
20°	2955	2907	2828
25°	2834	2772	2599
30°	2685	2600	2341
35°	2543	2403	2166
40°	2399	2189	1971
45°	2261	2024	1782
50°	2093	1879	1589
55°	1937	1702	1423
60°	1774	1521	1274
65°	1561	1332	1128
70°	1286	1166	958
75°	1023	892	936
80°	688	645	601
85°	426	513	599



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.8	4.7
10°-20°	153.0	13.0
20°-30°	211.9	18.0
30°-40°	225.9	19.2
40°-50°	206.1	17.5
50°-60°	161.5	13.7
60°-70°	105.2	8.9
70°-80°	46.6	4.0
80°-90°	10.0	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°	420.7	35.8
0°-40°	646.6	55.0
0°-60°	1014.1	86.2
0°-90°	1176.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1176.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	599	599	599	599	599	
5°	589	588	588	587	587	56
15°	551	551	545	540	537	155
25°	477	474	467	450	438	219
35°	387	384	366	338	330	242
45°	297	291	266	244	234	229
55°	206	200	181	160	152	185
65°	123	116	105	107	89	121
75°	49	46	43	41	45	53
85°	7	8	8	9	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	599.0	599.0	599.0	599.0	599.0
2.5°	594.9	594.9	594.9	594.2	594.2
5°	588.7	588.0	588.0	587.3	587.3
7.5°	583.8	583.1	582.4	581.7	580.3
10°	576.9	576.9	576.2	572.7	572.0
12.5°	565.8	565.1	562.3	557.5	556.1
15°	550.6	550.6	545.0	539.5	537.4
17.5°	533.9	533.2	526.3	520.8	518.0
20°	515.9	514.5	507.6	498.6	493.8
22.5°	495.9	495.9	487.5	475.8	470.9
25°	477.2	474.4	466.8	450.1	437.7
27.5°	455.7	451.5	443.2	419.7	405.1
30°	432.1	430.1	418.3	387.8	376.7
32.5°	410.0	406.5	394.0	362.2	353.2
35°	387.1	384.4	365.7	338.0	329.6
37.5°	364.3	360.8	337.3	315.1	304.7
40°	341.4	337.3	311.6	291.6	280.5
42.5°	319.9	314.4	289.5	268.0	255.5
45°	297.1	290.9	265.9	243.8	234.1
47.5°	274.2	268.7	245.8	223.0	211.9
50°	250.0	245.2	224.4	201.5	189.8
52.5°	229.9	222.3	202.2	179.4	169.7
55°	206.4	200.1	181.4	160.0	151.7
57.5°	184.9	178.7	161.4	141.3	134.4
60°	164.8	155.8	141.3	124.0	118.4
62.5°	142.7	135.7	123.3	108.7	115.7
65°	122.6	115.7	104.6	106.6	88.6
67.5°	100.4	97.0	87.3	77.6	74.8
70°	81.7	77.6	74.1	63.7	60.9
72.5°	65.1	60.9	56.1	50.6	48.5
75°	49.2	45.7	42.9	40.9	45.0
77.5°	33.9	32.5	30.5	28.4	27.7
80°	22.2	21.5	20.8	20.1	19.4
82.5°	13.2	13.2	13.2	13.2	13.2
85°	6.9	7.6	8.3	9.0	9.7
87.5°	4.2	4.2	4.8	5.5	6.2
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)