

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: P545007

Luminaire Tested: **FMR-12-1-LD4-2HI-40-UNV-93-84-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: P545007
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-12-1-LD4-2HI-40-UNV-93-84-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

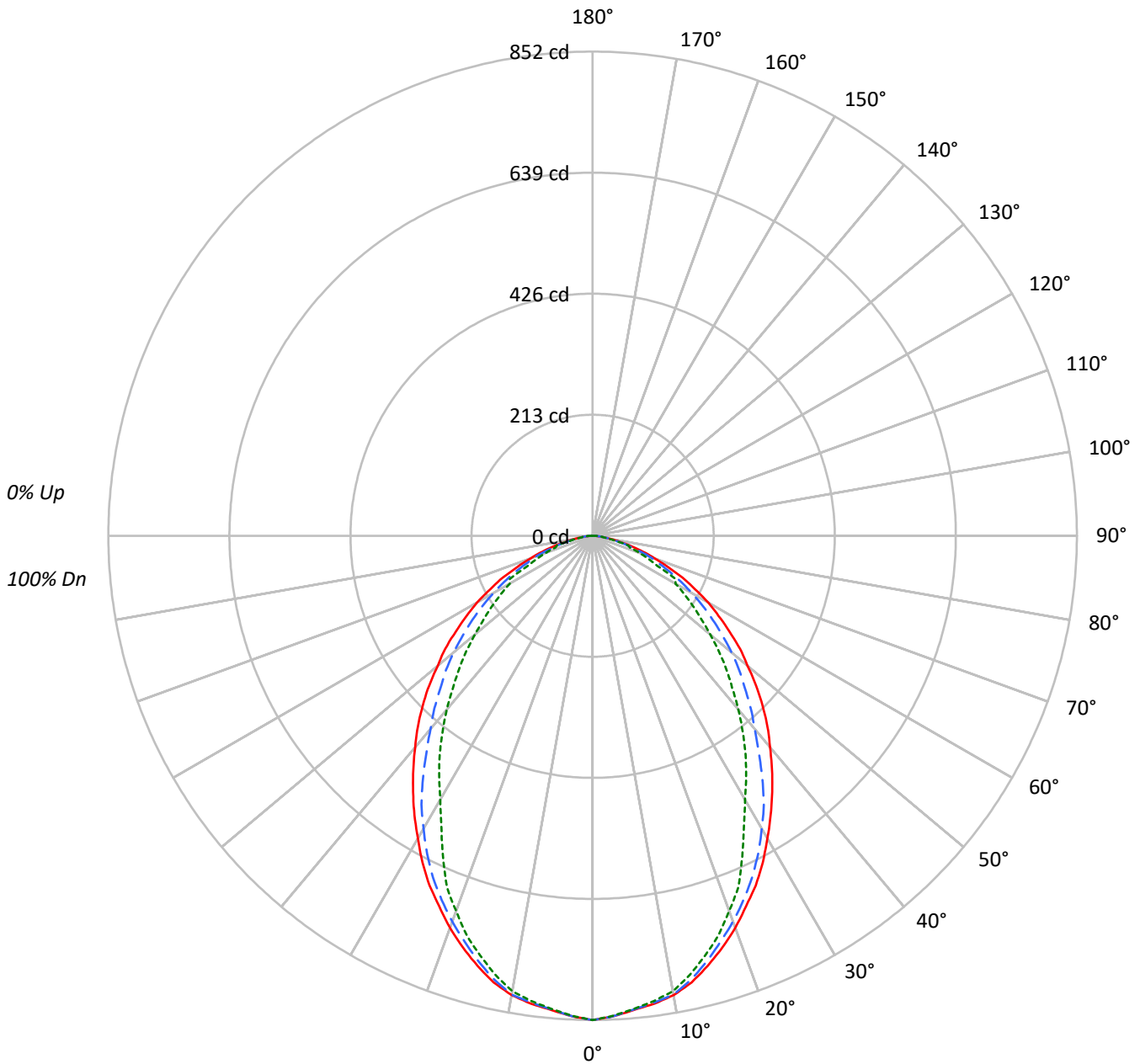
Lumens per Lamp: N/A
Luminaire Lumens: 1673.0 lumens
Efficiency: N/A
Efficacy: 77.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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									
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°	9173	9173	9173
5°	9048	9037	9028
10°	8970	8959	8895
15°	8728	8641	8519
20°	8408	8273	8047
25°	8062	7886	7396
30°	7641	7397	6662
35°	7236	6836	6163
40°	6825	6229	5606
45°	6435	5759	5069
50°	5956	5345	4520
55°	5510	4844	4050
60°	5048	4327	3627
65°	4442	3790	3212
70°	3660	3317	2729
75°	2907	2541	2662
80°	1953	1835	1711
85°	1223	1457	1704



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.3	4.7
10°-20°	217.7	13.0
20°-30°	301.4	18.0
30°-40°	321.4	19.2
40°-50°	293.2	17.5
50°-60°	229.7	13.7
60°-70°	149.7	8.9
70°-80°	66.3	4.0
80°-90°	14.2	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°	598.4	35.8
0°-40°	919.8	55.0
0°-60°	1442.8	86.2
0°-90°	1673.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1673.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	852	852	852	852	852	
5°	837	836	836	836	836	79
15°	783	783	775	768	764	220
25°	679	675	664	640	623	312
35°	551	547	520	481	469	344
45°	423	414	378	347	333	326
55°	294	285	258	228	216	263
65°	174	164	149	152	126	172
75°	70	65	61	58	64	75
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	852.2	852.2	852.2	852.2	852.2
2.5°	846.3	846.3	846.3	845.3	845.3
5°	837.4	836.4	836.4	835.5	835.5
7.5°	830.5	829.5	828.6	827.6	825.6
10°	820.7	820.7	819.7	814.8	813.8
12.5°	804.9	803.9	800.0	793.1	791.1
15°	783.2	783.2	775.4	767.5	764.5
17.5°	759.6	758.6	748.8	740.9	736.9
20°	734.0	732.0	722.2	709.3	702.5
22.5°	705.4	705.4	693.6	676.8	669.9
25°	678.8	674.9	664.0	640.4	622.7
27.5°	648.3	642.4	630.5	597.0	576.3
30°	614.8	611.8	595.1	551.7	536.0
32.5°	583.2	578.3	560.6	515.3	502.5
35°	550.7	546.8	520.2	480.8	469.0
37.5°	518.2	513.3	479.8	448.3	433.5
40°	485.7	479.8	443.3	414.8	399.0
42.5°	455.2	447.3	411.8	381.3	363.5
45°	422.7	413.8	378.3	346.8	333.0
47.5°	390.1	382.3	349.7	317.2	301.5
50°	355.7	348.8	319.2	286.7	269.9
52.5°	327.1	316.3	287.7	255.2	241.4
55°	293.6	284.7	258.1	227.6	215.8
57.5°	263.1	254.2	229.6	201.0	191.1
60°	234.5	221.7	201.0	176.4	168.5
62.5°	203.0	193.1	175.4	154.7	164.5
65°	174.4	164.5	148.8	151.7	126.1
67.5°	142.9	137.9	124.1	110.3	106.4
70°	116.3	110.3	105.4	90.6	86.7
72.5°	92.6	86.7	79.8	71.9	69.0
75°	69.9	65.0	61.1	58.1	64.0
77.5°	48.3	46.3	43.3	40.4	39.4
80°	31.5	30.5	29.6	28.6	27.6
82.5°	18.7	18.7	18.7	18.7	18.7
85°	9.9	10.8	11.8	12.8	13.8
87.5°	5.9	5.9	6.9	7.9	8.9
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)