

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: P545044

Luminaire Tested: **FMR-12-1-LD4-2HI-50-UNV-93-94-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: P545044
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-50-UNV-93-94-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

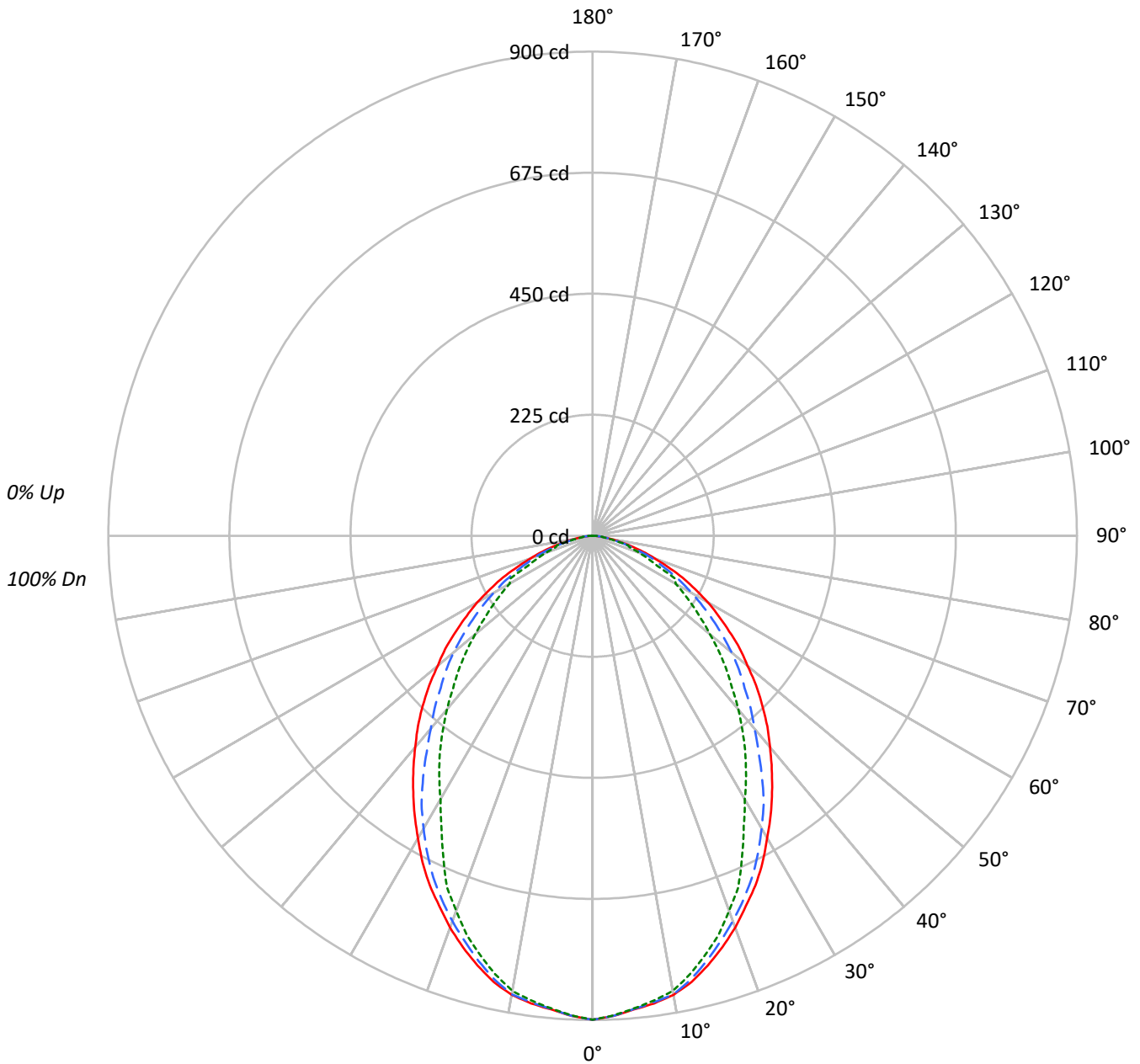
Lumens per Lamp: N/A
Luminaire Lumens: 1766.0 lumens
Efficiency: N/A
Efficacy: 81.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (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°	9683	9683	9683
5°	9552	9540	9529
10°	9469	9458	9389
15°	9214	9121	8993
20°	8875	8732	8494
25°	8510	8324	7807
30°	8065	7807	7031
35°	7638	7215	6504
40°	7204	6576	5918
45°	6791	6078	5351
50°	6286	5643	4773
55°	5816	5114	4275
60°	5328	4568	3828
65°	4689	3999	3390
70°	3862	3503	2880
75°	3069	2682	2811
80°	2064	1934	1804
85°	1284	1544	1803



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.7	4.7
10°-20°	229.8	13.0
20°-30°	318.2	18.0
30°-40°	339.3	19.2
40°-50°	309.5	17.5
50°-60°	242.5	13.7
60°-70°	158.0	8.9
70°-80°	70.0	4.0
80°-90°	15.0	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°	631.7	35.8
0°-40°	971.0	55.0
0°-60°	1522.9	86.2
0°-90°	1766.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1766.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	900	900	900	900	900	
5°	884	883	883	882	882	84
15°	827	827	818	810	807	232
25°	716	712	701	676	657	329
35°	581	577	549	508	495	363
45°	446	437	399	366	352	344
55°	310	301	272	240	228	278
65°	184	174	157	160	133	181
75°	74	69	64	61	68	79
85°	10	11	12	14	15	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	899.6	899.6	899.6	899.6	899.6
2.5°	893.3	893.3	893.3	892.3	892.3
5°	884.0	882.9	882.9	881.9	881.9
7.5°	876.7	875.7	874.6	873.6	871.5
10°	866.3	866.3	865.3	860.1	859.0
12.5°	849.7	848.6	844.5	837.2	835.1
15°	826.8	826.8	818.5	810.1	807.0
17.5°	801.8	800.8	790.4	782.1	777.9
20°	774.8	772.7	762.3	748.8	741.5
22.5°	744.6	744.6	732.1	714.5	707.2
25°	716.5	712.4	700.9	676.0	657.3
27.5°	684.3	678.1	665.6	630.2	608.4
30°	648.9	645.8	628.1	582.4	565.7
32.5°	615.7	610.5	591.7	543.9	530.4
35°	581.3	577.2	549.1	507.5	495.0
37.5°	547.0	541.8	506.5	473.2	457.6
40°	512.7	506.5	468.0	437.8	421.2
42.5°	480.5	472.1	434.7	402.5	383.8
45°	446.1	436.8	399.3	366.1	351.5
47.5°	411.8	403.5	369.2	334.9	318.2
50°	375.4	368.2	337.0	302.6	285.0
52.5°	345.3	333.8	303.7	269.4	254.8
55°	309.9	300.6	272.5	240.2	227.8
57.5°	277.7	268.3	242.3	212.2	201.8
60°	247.5	234.0	212.2	186.2	177.8
62.5°	214.2	203.8	185.1	163.3	173.7
65°	184.1	173.7	157.0	160.2	133.1
67.5°	150.8	145.6	131.0	116.5	112.3
70°	122.7	116.5	111.3	95.7	91.5
72.5°	97.8	91.5	84.2	75.9	72.8
75°	73.8	68.6	64.5	61.4	67.6
77.5°	51.0	48.9	45.8	42.6	41.6
80°	33.3	32.2	31.2	30.2	29.1
82.5°	19.8	19.8	19.8	19.8	19.8
85°	10.4	11.4	12.5	13.5	14.6
87.5°	6.2	6.2	7.3	8.3	9.4
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)