

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: P545808

Luminaire Tested: **FMR-12-2-LD4-2STD-50-UNV-93-85-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: P545808
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-93-85-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

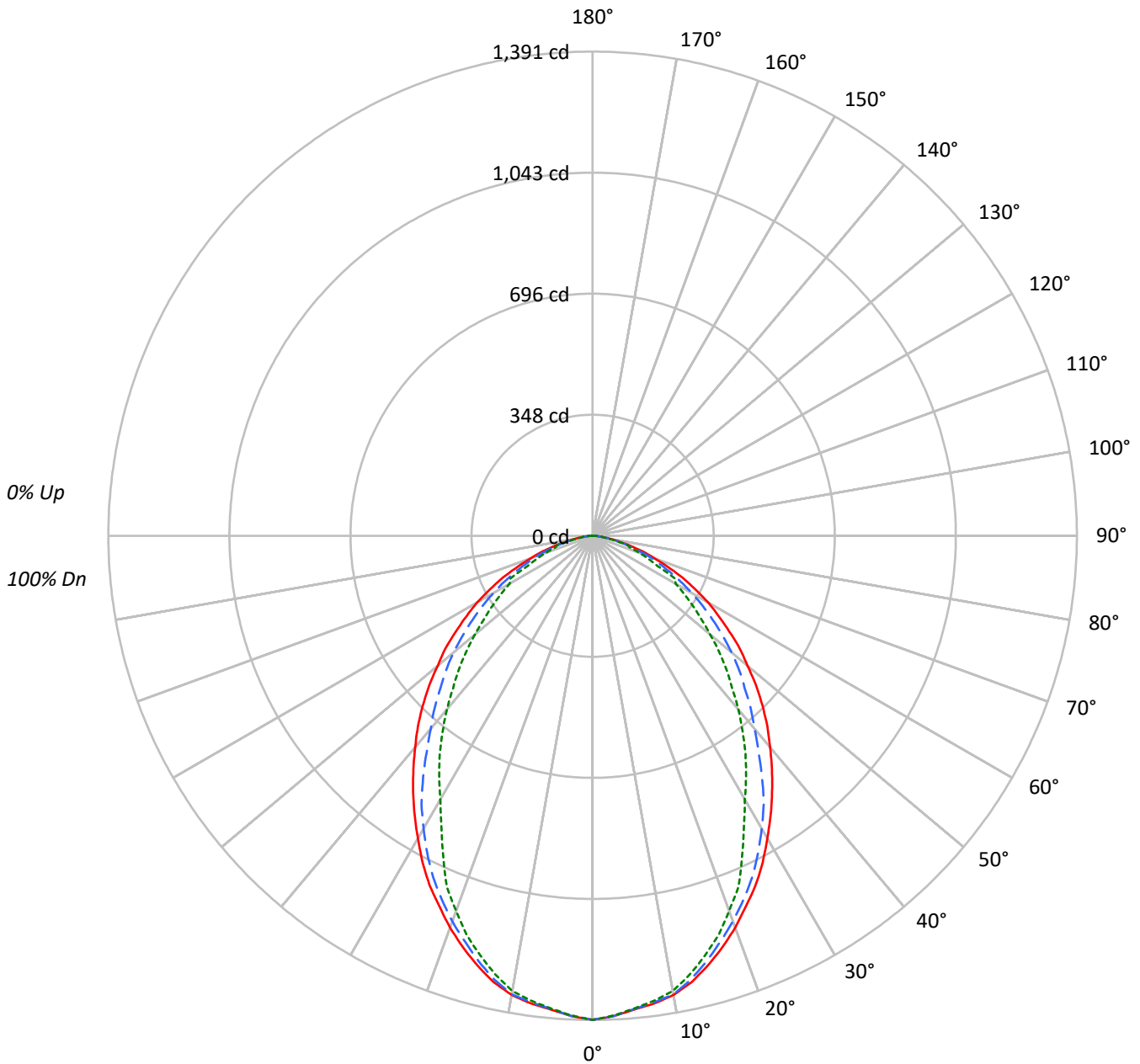
Lumens per Lamp: N/A
Luminaire Lumens: 2730.0 lumens
Efficiency: N/A
Efficacy: 82.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (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				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°	7484	7484	7484
5°	7383	7374	7365
10°	7319	7310	7257
15°	7121	7049	6951
20°	6860	6749	6565
25°	6578	6435	6033
30°	6234	6034	5435
35°	5905	5577	5027
40°	5569	5082	4574
45°	5249	4698	4136
50°	4860	4361	3688
55°	4495	3952	3304
60°	4118	3531	2959
65°	3624	3092	2621
70°	2985	2707	2227
75°	2373	2073	2173
80°	1593	1494	1395
85°	994	1192	1389



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.4	4.7
10°-20°	355.3	13.0
20°-30°	491.8	18.0
30°-40°	524.4	19.2
40°-50°	478.4	17.5
50°-60°	374.8	13.7
60°-70°	244.3	8.9
70°-80°	108.2	4.0
80°-90°	23.2	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°	976.5	35.8
0°-40°	1501.0	55.0
0°-60°	2354.2	86.2
0°-90°	2730.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2730.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1391	1391	1391	1391	1391	
5°	1366	1365	1365	1363	1363	130
15°	1278	1278	1265	1252	1248	359
25°	1108	1101	1084	1045	1016	509
35°	899	892	849	784	765	562
45°	690	675	617	566	543	531
55°	479	465	421	371	352	430
65°	285	268	243	248	206	280
75°	114	106	100	95	104	122
85°	16	18	19	21	22	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1390.6	1390.6	1390.6	1390.6	1390.6
2.5°	1381.0	1381.0	1381.0	1379.4	1379.4
5°	1366.5	1364.9	1364.9	1363.3	1363.3
7.5°	1355.3	1353.6	1352.0	1350.4	1347.2
10°	1339.2	1339.2	1337.6	1329.5	1327.9
12.5°	1313.5	1311.9	1305.4	1294.2	1291.0
15°	1278.1	1278.1	1265.2	1252.4	1247.5
17.5°	1239.5	1237.9	1221.8	1209.0	1202.5
20°	1197.7	1194.5	1178.4	1157.5	1146.3
22.5°	1151.1	1151.1	1131.8	1104.5	1093.2
25°	1107.7	1101.2	1083.6	1045.0	1016.0
27.5°	1057.8	1048.2	1028.9	974.2	940.5
30°	1003.2	998.4	971.0	900.3	874.6
32.5°	951.7	943.7	914.8	840.8	819.9
35°	898.7	892.3	848.8	784.5	765.2
37.5°	845.6	837.6	782.9	731.5	707.4
40°	792.6	782.9	723.4	676.8	651.1
42.5°	742.7	729.9	672.0	622.2	593.2
45°	689.7	675.2	617.3	565.9	543.4
47.5°	636.6	623.8	570.7	517.7	491.9
50°	580.4	569.1	520.9	467.8	440.5
52.5°	533.7	516.1	469.4	416.4	393.9
55°	479.1	464.6	421.2	371.4	352.1
57.5°	429.2	414.8	374.6	328.0	311.9
60°	382.6	361.7	328.0	287.8	274.9
62.5°	331.2	315.1	286.2	252.4	268.5
65°	284.6	268.5	242.8	247.6	205.8
67.5°	233.1	225.1	202.6	180.1	173.6
70°	189.7	180.1	172.0	147.9	141.5
72.5°	151.1	141.5	130.2	117.4	112.5
75°	114.1	106.1	99.7	94.9	104.5
77.5°	78.8	75.6	70.7	65.9	64.3
80°	51.4	49.8	48.2	46.6	45.0
82.5°	30.5	30.5	30.5	30.5	30.5
85°	16.1	17.7	19.3	20.9	22.5
87.5°	9.6	9.6	11.3	12.9	14.5
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)