

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: P545679

Luminaire Tested: **FMR-12-2-LD4-2LO-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: P545679
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-LD4-2LO-40-UNV-93-84-EDD
Description: 1X2 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

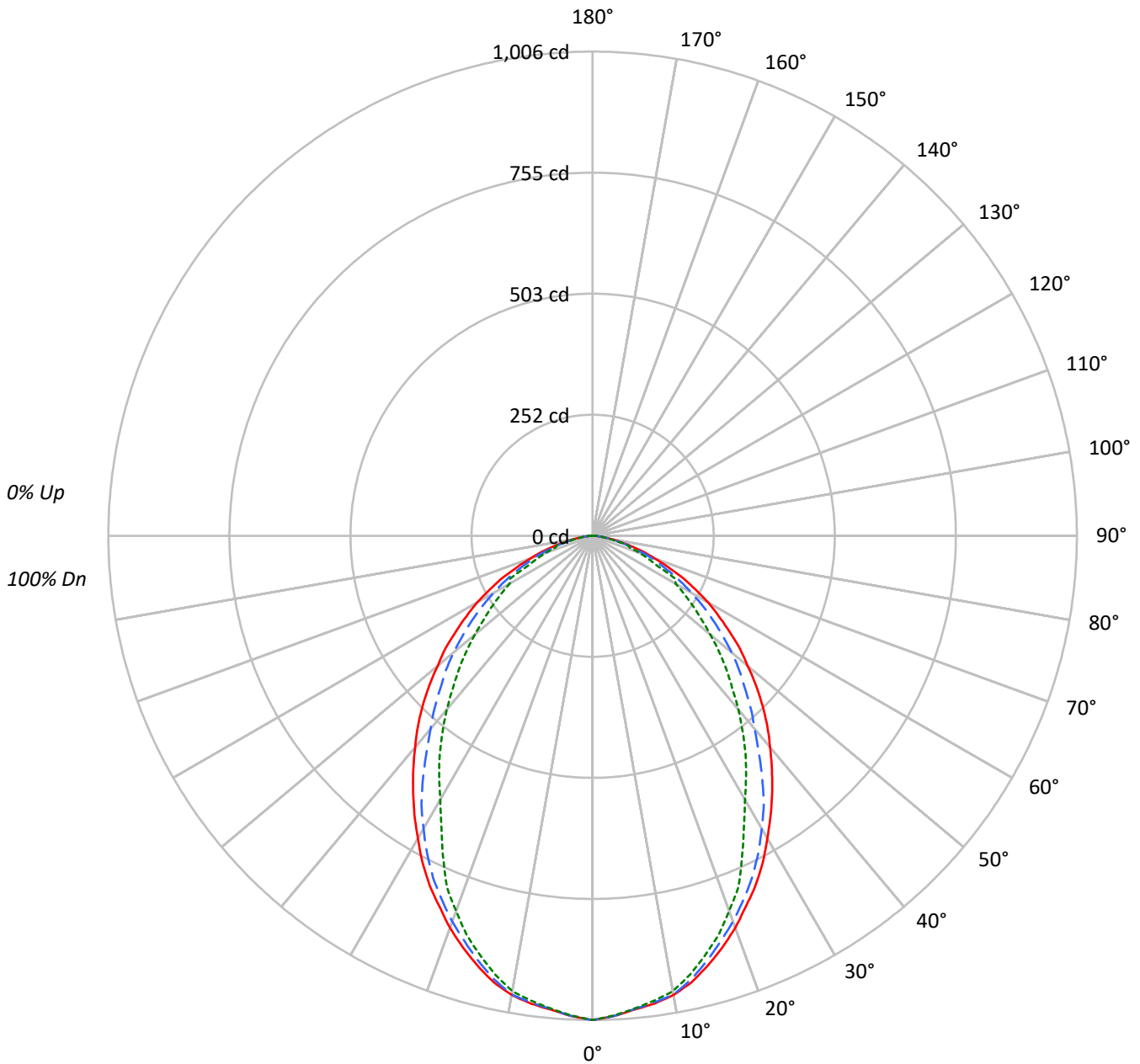
Lumens per Lamp: N/A
Luminaire Lumens: 1975.0 lumens
Efficiency: N/A
Efficacy: 84.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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				
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°	5414	5414	5414
5°	5341	5334	5329
10°	5294	5288	5250
15°	5152	5100	5029
20°	4963	4883	4750
25°	4758	4655	4365
30°	4510	4366	3932
35°	4271	4035	3637
40°	4029	3677	3309
45°	3797	3399	2992
50°	3516	3155	2668
55°	3252	2859	2390
60°	2979	2554	2141
65°	2622	2236	1896
70°	2159	1958	1610
75°	1718	1499	1572
80°	1153	1082	1010
85°	716	865	1007



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.6	4.7
10°-20°	257.0	13.0
20°-30°	355.8	18.0
30°-40°	379.4	19.2
40°-50°	346.1	17.5
50°-60°	271.2	13.7
60°-70°	176.7	8.9
70°-80°	78.3	4.0
80°-90°	16.8	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°	706.5	35.8
0°-40°	1085.9	55.0
0°-60°	1703.2	86.2
0°-90°	1975.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1975.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1006	1006	1006	1006	1006	
5°	989	987	987	986	986	94
15°	925	925	915	906	902	260
25°	801	797	784	756	735	368
35°	650	646	614	568	554	406
45°	499	488	447	409	393	384
55°	347	336	305	269	255	311
65°	206	194	176	179	149	203
75°	83	77	72	69	76	88
85°	12	13	14	15	16	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1006.0	1006.0	1006.0	1006.0	1006.0
2.5°	999.1	999.1	999.1	997.9	997.9
5°	988.6	987.4	987.4	986.3	986.3
7.5°	980.5	979.3	978.1	977.0	974.6
10°	968.8	968.8	967.7	961.8	960.7
12.5°	950.2	949.0	944.4	936.3	933.9
15°	924.6	924.6	915.3	906.0	902.5
17.5°	896.7	895.5	883.9	874.6	870.0
20°	866.5	864.1	852.5	837.4	829.3
22.5°	832.7	832.7	818.8	799.0	790.9
25°	801.3	796.7	783.9	756.0	735.0
27.5°	765.3	758.3	744.4	704.8	680.4
30°	725.7	722.3	702.5	651.3	632.7
32.5°	688.5	682.7	661.8	608.3	593.2
35°	650.1	645.5	614.1	567.6	553.6
37.5°	611.8	605.9	566.4	529.2	511.7
40°	573.4	566.4	523.4	489.6	471.0
42.5°	537.3	528.0	486.2	450.1	429.2
45°	498.9	488.5	446.6	409.4	393.1
47.5°	460.6	451.3	412.9	374.5	355.9
50°	419.9	411.7	376.8	338.4	318.7
52.5°	386.1	373.3	339.6	301.2	284.9
55°	346.6	336.1	304.7	268.7	254.7
57.5°	310.5	300.1	271.0	237.3	225.6
60°	276.8	261.7	237.3	208.2	198.9
62.5°	239.6	228.0	207.0	182.6	194.2
65°	205.9	194.2	175.6	179.1	148.9
67.5°	168.6	162.8	146.5	130.3	125.6
70°	137.2	130.3	124.4	107.0	102.3
72.5°	109.3	102.3	94.2	84.9	81.4
75°	82.6	76.8	72.1	68.6	75.6
77.5°	57.0	54.7	51.2	47.7	46.5
80°	37.2	36.1	34.9	33.7	32.6
82.5°	22.1	22.1	22.1	22.1	22.1
85°	11.6	12.8	14.0	15.1	16.3
87.5°	7.0	7.0	8.1	9.3	10.5
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)