

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: P588931

Luminaire Tested: **FMR-24-2-LD4-1STD-40-UNV-81-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P588931
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-2-LD4-1STD-40-UNV-81-96-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

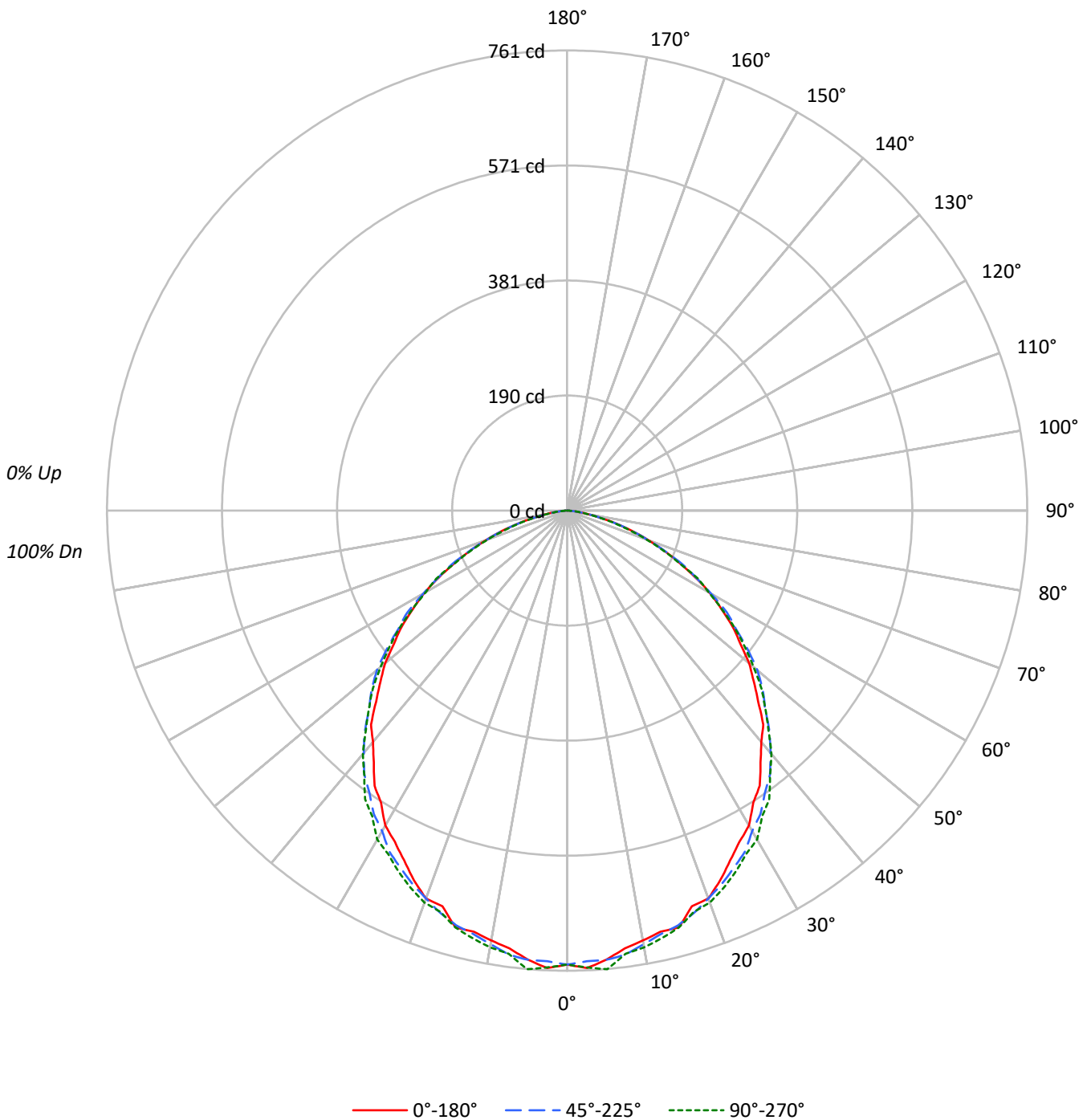
Lumens per Lamp: N/A
Luminaire Lumens: 1892.0 lumens
Efficiency: N/A
Efficacy: 114.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2020	2020	2020
5°	2014	2014	2057
10°	1973	1990	2004
15°	1988	1977	1989
20°	1955	1955	1975
25°	1895	1936	1957
30°	1868	1901	1952
35°	1825	1872	1914
40°	1754	1838	1846
45°	1700	1761	1764
50°	1644	1719	1686
55°	1567	1597	1586
60°	1466	1480	1453
65°	1307	1340	1297
70°	1121	1125	1094
75°	888	886	852
80°	595	578	556
85°	324	321	299



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.6	3.7
10°-20°	200.1	10.6
20°-30°	299.8	15.8
30°-40°	355.4	18.8
40°-50°	356.0	18.8
50°-60°	302.2	16.0
60°-70°	203.7	10.8
70°-80°	89.5	4.7
80°-90°	14.6	0.8
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°	570.6	30.2
0°-40°	925.9	48.9
0°-60°	1584.2	83.7
0°-90°	1892.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1892.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	751	751	751	751	751	
5°	745	744	746	743	761	70
15°	714	705	710	714	714	199
25°	638	642	652	661	659	295
35°	555	557	570	583	583	345
45°	447	455	463	475	463	346
55°	334	332	340	338	338	297
65°	205	202	210	202	204	204
75°	85	84	85	79	82	92
85°	10	10	10	10	10	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	750.7	750.7	750.7	750.7	750.7
2.5°	757.2	751.5	746.1	752.3	756.1
5°	745.4	743.6	745.7	743.4	761.4
7.5°	730.1	736.7	740.6	738.2	739.3
10°	721.9	719.6	728.2	734.2	733.3
12.5°	713.2	716.7	717.2	723.7	724.2
15°	713.7	705.4	709.8	713.5	713.8
17.5°	686.0	694.9	697.9	706.3	695.8
20°	682.6	676.1	682.6	691.2	689.8
22.5°	661.7	654.4	668.4	676.1	675.6
25°	638.1	641.6	652.0	660.6	659.2
27.5°	617.3	621.4	636.3	648.1	640.5
30°	601.3	599.3	611.9	622.4	628.2
32.5°	572.7	580.1	594.8	605.2	599.7
35°	555.4	557.0	569.9	583.1	582.7
37.5°	525.1	532.7	550.8	554.5	551.1
40°	499.2	506.8	523.2	527.2	525.5
42.5°	480.1	481.4	495.5	500.0	492.8
45°	446.8	455.2	462.7	474.7	463.4
47.5°	418.5	422.4	438.7	441.9	436.0
50°	392.8	394.2	410.6	406.6	402.7
52.5°	360.6	366.3	375.5	374.7	370.2
55°	334.0	331.8	340.5	338.2	338.1
57.5°	302.1	306.0	313.2	309.5	303.6
60°	272.3	272.4	275.0	270.8	270.0
62.5°	239.0	240.2	240.8	235.6	244.0
65°	205.2	202.5	210.4	202.4	203.7
67.5°	174.1	175.4	174.7	169.6	171.6
70°	142.5	144.2	143.0	137.2	139.0
72.5°	113.6	111.5	112.8	105.7	108.9
75°	85.4	83.6	85.2	79.2	81.9
77.5°	58.2	59.5	58.5	55.3	57.2
80°	38.4	37.3	37.3	35.5	35.9
82.5°	22.4	21.3	21.0	20.5	21.3
85°	10.5	10.2	10.4	10.1	9.7
87.5°	3.8	3.9	3.9	3.7	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)