

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: P589793

Luminaire Tested: **FMR-24-2-LD4-4STD-40-UNV-81-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589793
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-LD4-4STD-40-UNV-81-88-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

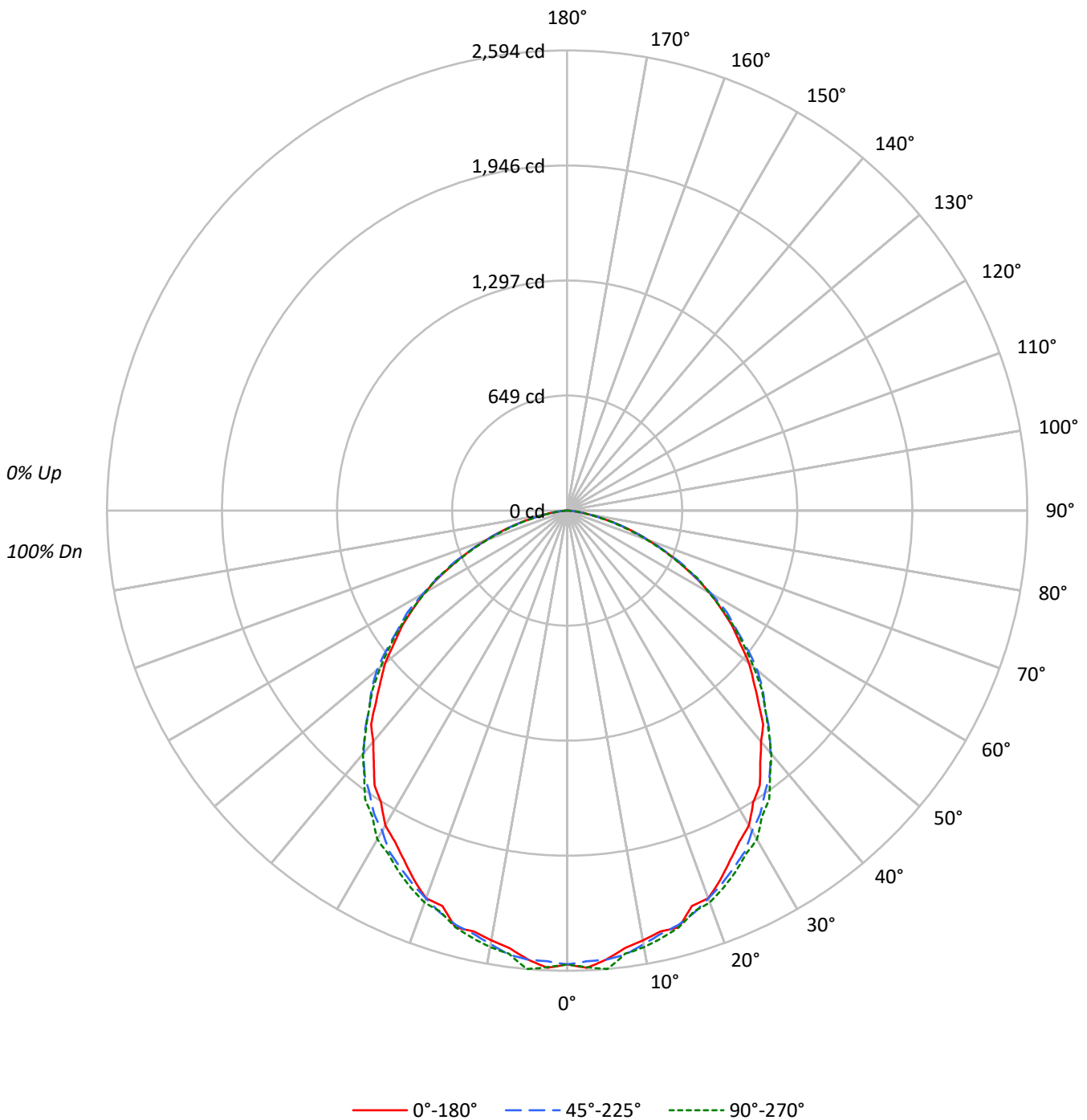
Lumens per Lamp: N/A
Luminaire Lumens: 6447.0 lumens
Efficiency: N/A
Efficacy: 96.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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	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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6884	6884	6884
5°	6861	6863	7008
10°	6722	6780	6828
15°	6775	6738	6776
20°	6660	6660	6731
25°	6456	6597	6669
30°	6367	6479	6651
35°	6217	6380	6523
40°	5975	6263	6291
45°	5794	6000	6009
50°	5604	5857	5745
55°	5339	5444	5405
60°	4993	5043	4952
65°	4452	4565	4420
70°	3820	3833	3726
75°	3026	3018	2902
80°	2027	1971	1894
85°	1102	1090	1019



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	240.6	3.7
10°-20°	681.9	10.6
20°-30°	1021.7	15.8
30°-40°	1210.9	18.8
40°-50°	1213.2	18.8
50°-60°	1029.8	16.0
60°-70°	694.3	10.8
70°-80°	305.1	4.7
80°-90°	49.6	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°	1944.3	30.2
0°-40°	3155.2	48.9
0°-60°	5398.1	83.7
0°-90°	6447.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6447.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2558	2558	2558	2558	2558	
5°	2540	2534	2541	2533	2594	239
15°	2432	2404	2419	2431	2432	678
25°	2174	2186	2222	2251	2246	1005
35°	1892	1898	1942	1987	1986	1175
45°	1523	1551	1577	1617	1579	1178
55°	1138	1130	1160	1152	1152	1012
65°	699	690	717	690	694	695
75°	291	285	290	270	279	312
85°	36	35	35	34	33	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2558.0	2558.0	2558.0	2558.0	2558.0
2.5°	2580.1	2560.6	2542.5	2563.6	2576.5
5°	2539.8	2533.9	2540.8	2533.2	2594.3
7.5°	2487.7	2510.4	2523.7	2515.4	2519.0
10°	2459.9	2452.0	2481.4	2501.9	2498.9
12.5°	2430.2	2442.1	2443.7	2465.9	2467.8
15°	2431.8	2403.8	2418.6	2431.2	2432.2
17.5°	2337.4	2367.8	2378.0	2406.7	2371.1
20°	2325.8	2303.7	2325.8	2355.2	2350.6
22.5°	2254.8	2230.0	2277.6	2303.7	2302.0
25°	2174.2	2186.1	2221.8	2250.8	2246.2
27.5°	2103.5	2117.4	2168.3	2208.2	2182.5
30°	2049.0	2042.1	2085.0	2120.7	2140.5
32.5°	1951.6	1976.7	2026.9	2062.3	2043.4
35°	1892.5	1898.1	1942.0	1987.0	1985.6
37.5°	1789.1	1815.2	1877.0	1889.5	1878.0
40°	1700.9	1727.0	1782.8	1796.4	1790.8
42.5°	1635.9	1640.5	1688.4	1703.9	1679.1
45°	1522.6	1551.0	1576.7	1617.4	1579.1
47.5°	1426.1	1439.4	1494.8	1505.7	1485.6
50°	1338.6	1343.2	1399.1	1385.5	1372.3
52.5°	1228.6	1248.1	1279.5	1276.9	1261.3
55°	1138.1	1130.5	1160.3	1152.3	1152.0
57.5°	1029.5	1042.7	1067.1	1054.6	1034.4
60°	927.8	928.1	937.0	922.8	920.2
62.5°	814.5	818.4	820.4	802.9	831.3
65°	699.2	690.0	717.0	689.6	694.2
67.5°	593.2	597.8	595.2	578.0	584.6
70°	485.5	491.5	487.2	467.7	473.6
72.5°	387.1	379.8	384.4	360.0	371.2
75°	291.0	285.0	290.3	269.8	279.1
77.5°	198.2	202.8	199.5	188.6	194.9
80°	130.8	127.2	127.2	120.9	122.2
82.5°	76.3	72.7	71.7	69.7	72.7
85°	35.7	34.7	35.3	34.3	33.0
87.5°	12.9	13.2	13.2	12.6	11.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)