

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: P589472

Luminaire Tested: **FMR-24-2-LD4-3STD-35-UNV-81-87-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589472
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-LD4-3STD-35-UNV-81-87-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

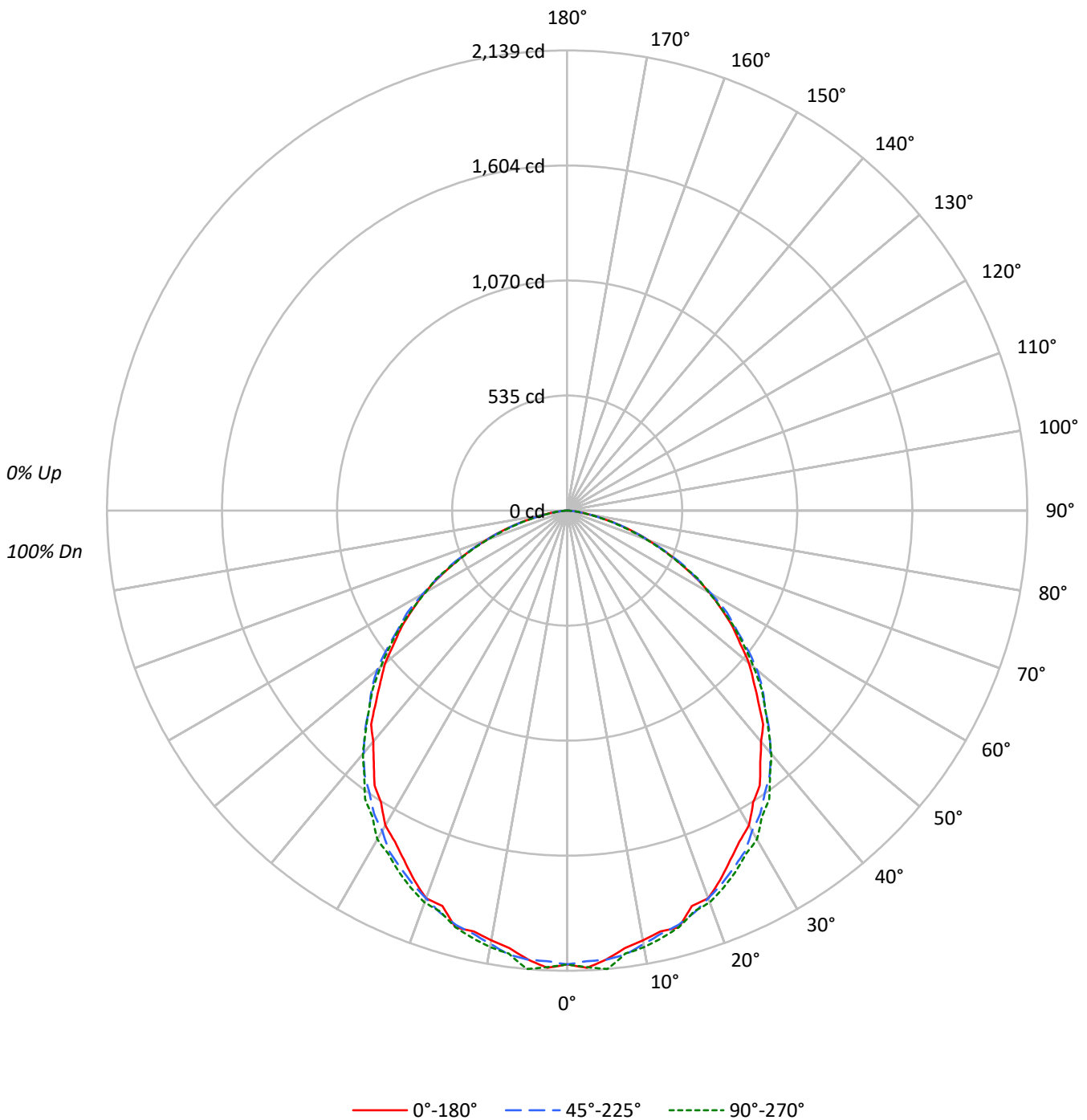
Lumens per Lamp: N/A
Luminaire Lumens: 5316.0 lumens
Efficiency: N/A
Efficacy: 106.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 50
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	
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°	5676	5676	5676
5°	5657	5659	5779
10°	5543	5591	5630
15°	5586	5556	5587
20°	5492	5492	5550
25°	5323	5440	5499
30°	5250	5342	5484
35°	5126	5260	5379
40°	4927	5164	5187
45°	4778	4948	4955
50°	4621	4829	4737
55°	4403	4488	4457
60°	4117	4158	4083
65°	3671	3764	3645
70°	3150	3161	3072
75°	2494	2489	2392
80°	1671	1624	1562
85°	908	898	840



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	198.4	3.7
10°-20°	562.3	10.6
20°-30°	842.5	15.8
30°-40°	998.5	18.8
40°-50°	1000.3	18.8
50°-60°	849.1	16.0
60°-70°	572.5	10.8
70°-80°	251.5	4.7
80°-90°	40.9	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°	1603.2	30.2
0°-40°	2601.7	48.9
0°-60°	4451.1	83.7
0°-90°	5316.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5316.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2109	2109	2109	2109	2109	
5°	2094	2089	2095	2089	2139	197
15°	2005	1982	1994	2005	2006	559
25°	1793	1803	1832	1856	1852	829
35°	1560	1565	1601	1638	1637	969
45°	1256	1279	1300	1334	1302	971
55°	938	932	957	950	950	835
65°	576	569	591	569	572	573
75°	240	235	239	222	230	257
85°	29	29	29	28	27	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2109.3	2109.3	2109.3	2109.3	2109.3
2.5°	2127.5	2111.4	2096.5	2113.9	2124.5
5°	2094.3	2089.4	2095.1	2088.8	2139.2
7.5°	2051.2	2070.0	2080.9	2074.1	2077.1
10°	2028.4	2021.8	2046.1	2063.0	2060.5
12.5°	2003.9	2013.7	2015.0	2033.3	2034.9
15°	2005.2	1982.1	1994.3	2004.7	2005.5
17.5°	1927.3	1952.4	1960.8	1984.5	1955.1
20°	1917.8	1899.6	1917.8	1942.0	1938.2
22.5°	1859.2	1838.8	1878.0	1899.6	1898.2
25°	1792.8	1802.6	1832.0	1856.0	1852.2
27.5°	1734.5	1746.0	1787.9	1820.8	1799.6
30°	1689.6	1683.9	1719.3	1748.7	1765.0
32.5°	1609.2	1629.9	1671.3	1700.5	1685.0
35°	1560.5	1565.1	1601.3	1638.4	1637.3
37.5°	1475.3	1496.8	1547.7	1558.0	1548.5
40°	1402.5	1424.1	1470.1	1481.2	1476.6
42.5°	1348.9	1352.7	1392.2	1405.0	1384.6
45°	1255.5	1278.9	1300.1	1333.6	1302.0
47.5°	1176.0	1186.8	1232.6	1241.6	1225.0
50°	1103.8	1107.6	1153.6	1142.5	1131.6
52.5°	1013.1	1029.2	1055.0	1052.9	1040.1
55°	938.5	932.2	956.7	950.2	949.9
57.5°	848.9	859.8	879.9	869.6	853.0
60°	765.0	765.3	772.6	760.9	758.7
62.5°	671.6	674.9	676.5	662.1	685.5
65°	576.5	568.9	591.2	568.6	572.5
67.5°	489.1	492.9	490.8	476.6	482.0
70°	400.3	405.2	401.7	385.6	390.5
72.5°	319.2	313.2	317.0	296.8	306.1
75°	239.9	235.0	239.4	222.5	230.1
77.5°	163.4	167.2	164.5	155.5	160.7
80°	107.8	104.8	104.8	99.7	100.8
82.5°	62.9	59.9	59.1	57.5	59.9
85°	29.4	28.6	29.1	28.3	27.2
87.5°	10.6	10.9	10.9	10.3	9.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)