

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: P589324

Luminaire Tested: **FMR-24-2-LD4-3HI-40-UNV-82-97-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589324
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-LD4-3HI-40-UNV-82-97-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

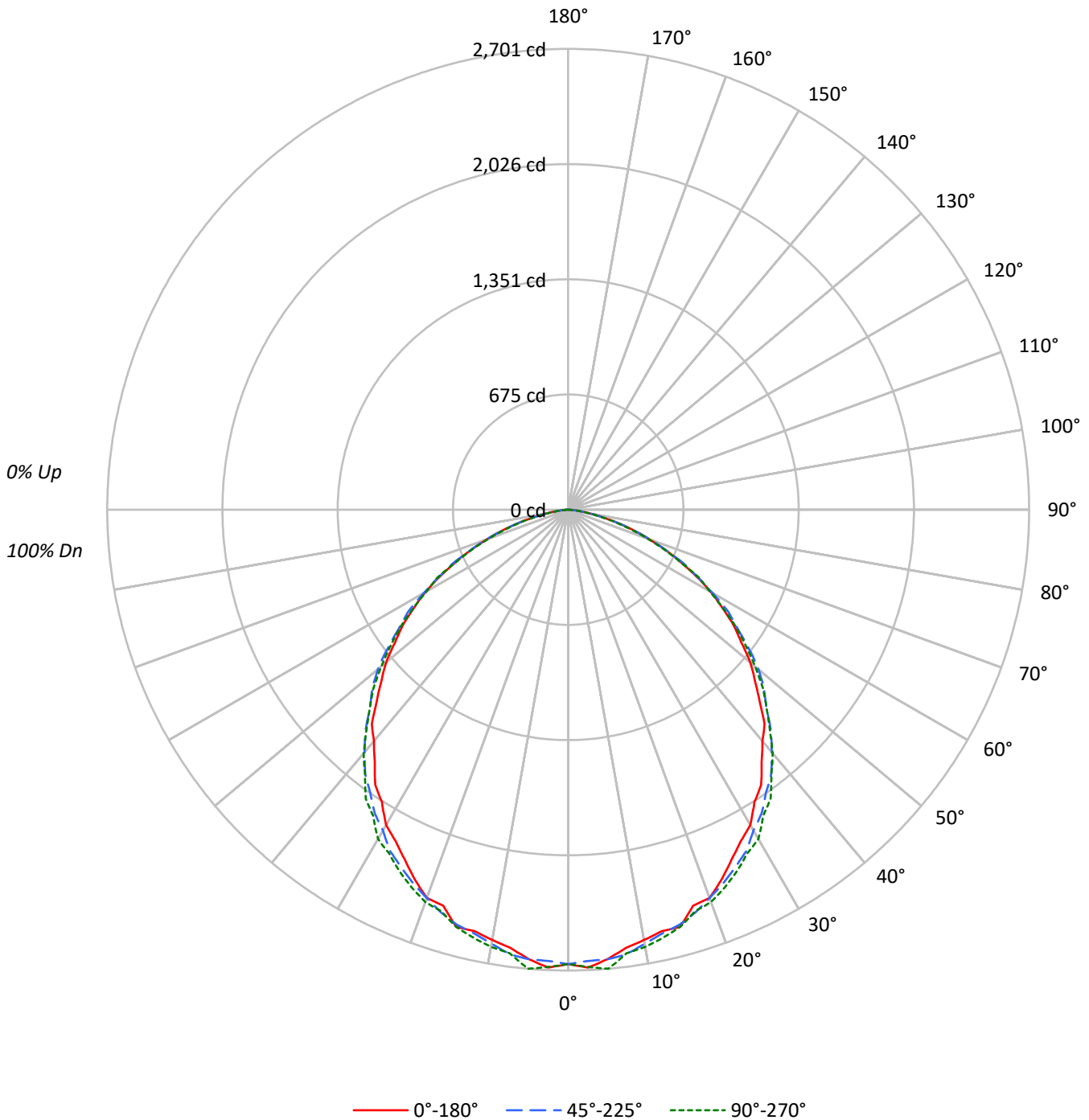
Lumens per Lamp: N/A
Luminaire Lumens: 6712.0 lumens
Efficiency: N/A
Efficacy: 103.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 64.8
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°	7167	7167	7167
5°	7143	7146	7296
10°	6998	7059	7109
15°	7053	7015	7054
20°	6934	6934	7008
25°	6721	6868	6944
30°	6629	6745	6925
35°	6473	6642	6791
40°	6221	6520	6549
45°	6033	6247	6256
50°	5834	6098	5981
55°	5559	5667	5627
60°	5198	5250	5156
65°	4635	4753	4602
70°	3977	3991	3880
75°	3149	3142	3021
80°	2111	2052	1971
85°	1145	1136	1062



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	250.5	3.7
10°-20°	710.0	10.6
20°-30°	1063.7	15.8
30°-40°	1260.7	18.8
40°-50°	1263.0	18.8
50°-60°	1072.1	16.0
60°-70°	722.8	10.8
70°-80°	317.6	4.7
80°-90°	51.6	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°	2024.2	30.2
0°-40°	3284.9	48.9
0°-60°	5620.0	83.7
0°-90°	6712.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6712.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2663	2663	2663	2663	2663	
5°	2644	2638	2645	2637	2701	249
15°	2532	2503	2518	2531	2532	705
25°	2264	2276	2313	2343	2339	1046
35°	1970	1976	2022	2069	2067	1223
45°	1585	1615	1642	1684	1644	1226
55°	1185	1177	1208	1200	1199	1054
65°	728	718	746	718	723	724
75°	303	297	302	281	291	325
85°	37	36	37	36	34	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2663.2	2663.2	2663.2	2663.2	2663.2
2.5°	2686.2	2665.9	2647.0	2669.0	2682.4
5°	2644.2	2638.1	2645.3	2637.4	2701.0
7.5°	2589.9	2613.6	2627.4	2618.8	2622.6
10°	2561.0	2552.8	2583.4	2604.7	2601.6
12.5°	2530.1	2542.5	2544.2	2567.2	2569.3
15°	2531.8	2502.6	2518.0	2531.1	2532.1
17.5°	2433.5	2465.1	2475.8	2505.7	2468.5
20°	2421.4	2398.4	2421.4	2452.0	2447.2
22.5°	2347.5	2321.7	2371.2	2398.4	2396.7
25°	2263.6	2276.0	2313.1	2343.4	2338.6
27.5°	2190.0	2204.5	2257.4	2299.0	2272.2
30°	2133.3	2126.1	2170.8	2207.9	2228.5
32.5°	2031.8	2058.0	2110.2	2147.0	2127.4
35°	1970.3	1976.1	2021.9	2068.6	2067.3
37.5°	1862.7	1889.8	1954.1	1967.2	1955.2
40°	1770.8	1798.0	1856.1	1870.2	1864.4
42.5°	1703.1	1707.9	1757.8	1773.9	1748.2
45°	1585.2	1614.7	1641.6	1683.9	1644.0
47.5°	1484.8	1498.5	1556.3	1567.6	1546.7
50°	1393.6	1398.5	1456.6	1442.5	1428.7
52.5°	1279.1	1299.4	1332.1	1329.3	1313.2
55°	1184.9	1177.0	1208.0	1199.7	1199.4
57.5°	1071.8	1085.5	1111.0	1097.9	1077.0
60°	965.9	966.2	975.5	960.7	958.0
62.5°	847.9	852.1	854.1	835.9	865.5
65°	727.9	718.3	746.5	718.0	722.8
67.5°	617.6	622.4	619.6	601.7	608.6
70°	505.5	511.7	507.2	486.9	493.1
72.5°	403.0	395.4	400.2	374.8	386.5
75°	302.9	296.7	302.2	280.9	290.6
77.5°	206.3	211.1	207.7	196.3	202.9
80°	136.2	132.4	132.4	125.9	127.2
82.5°	79.4	75.6	74.6	72.6	75.6
85°	37.1	36.1	36.8	35.8	34.4
87.5°	13.4	13.8	13.8	13.1	12.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)