

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P590837

Luminaire Tested: FSR-24-2-LD4-4LO-40-UNV-80-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590837
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
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-4LO-40-UNV-80-84-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5886.0 lumens
Efficiency: N/A
Efficacy: 125.8 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

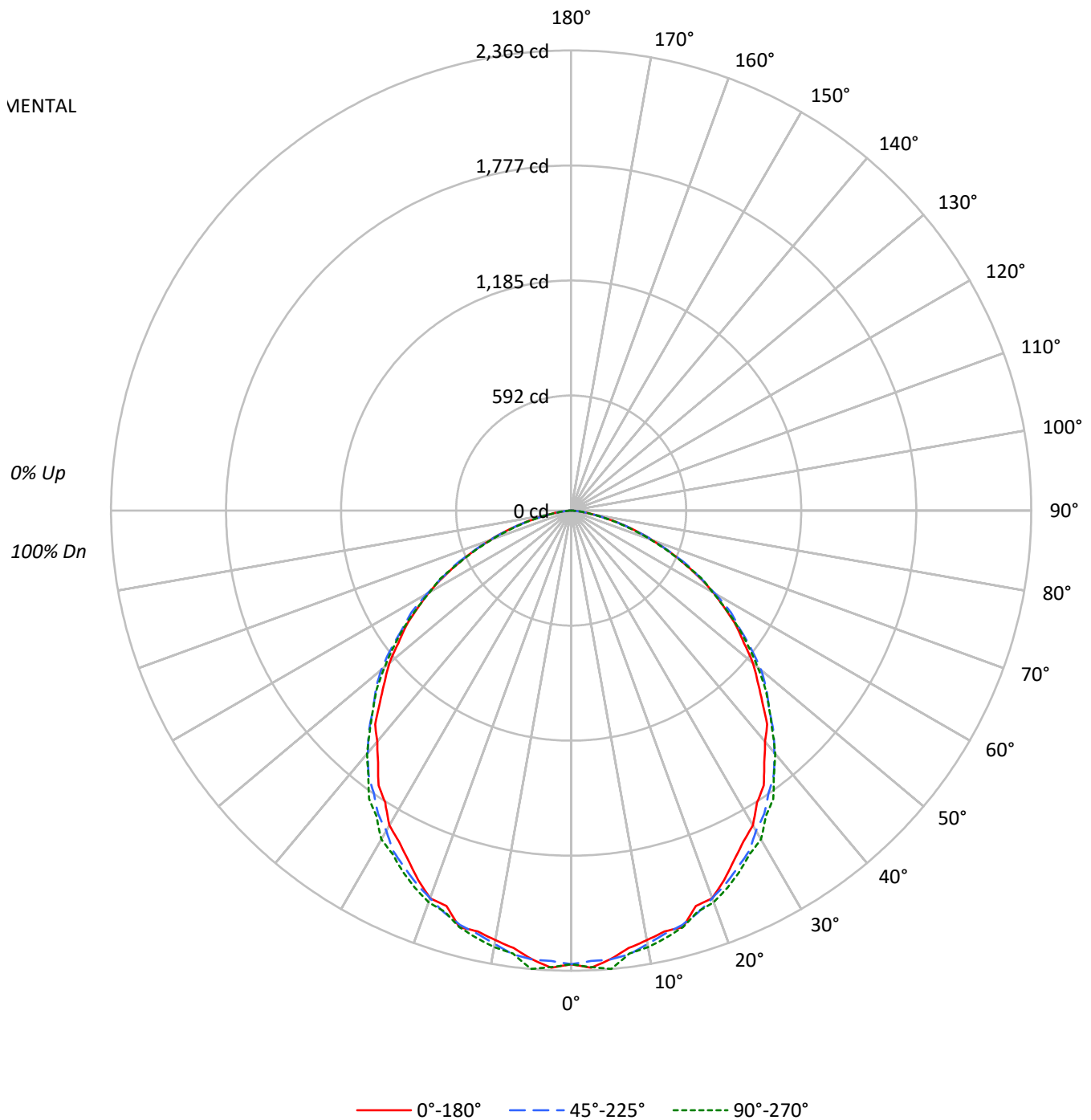
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6285	6285	6285
5°	6264	6266	6398
10°	6137	6190	6234
15°	6185	6152	6186
20°	6081	6081	6145
25°	5894	6023	6089
30°	5813	5915	6073
35°	5676	5824	5955
40°	5455	5718	5743
45°	5290	5478	5487
50°	5116	5347	5245
55°	4875	4970	4935
60°	4559	4604	4521
65°	4065	4168	4036
70°	3488	3500	3402
75°	2763	2756	2649
80°	1850	1799	1729
85°	1007	997	932

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5619 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	219.7	3.7
10°-20°	622.6	10.6
20°-30°	932.8	15.8
30°-40°	1105.5	18.8
40°-50°	1107.6	18.8
50°-60°	940.2	16.0
60°-70°	633.9	10.8
70°-80°	278.5	4.7
80°-90°	45.3	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°	1775.1	30.2
0°-40°	2880.6	48.9
0°-60°	4928.4	83.7
0°-90°	5886.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5886.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2335	2335	2335	2335	2335	
5°	2319	2313	2320	2313	2369	219
15°	2220	2195	2208	2220	2220	619
25°	1985	1996	2028	2055	2051	918
35°	1728	1733	1773	1814	1813	1073
45°	1390	1416	1440	1477	1442	1075
55°	1039	1032	1059	1052	1052	924
65°	638	630	655	630	634	635
75°	266	260	265	246	255	285
85°	33	32	32	31	30	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2335.4	2335.4	2335.4	2335.4	2335.4
2.5°	2355.6	2337.8	2321.2	2340.5	2352.3
5°	2318.8	2313.4	2319.7	2312.8	2368.6
7.5°	2271.2	2292.0	2304.1	2296.5	2299.8
10°	2245.9	2238.6	2265.5	2284.2	2281.4
12.5°	2218.7	2229.6	2231.1	2251.3	2253.1
15°	2220.2	2194.6	2208.2	2219.6	2220.5
17.5°	2134.0	2161.7	2171.1	2197.3	2164.7
20°	2123.4	2103.2	2123.4	2150.3	2146.0
22.5°	2058.6	2036.0	2079.4	2103.2	2101.7
25°	1985.0	1995.9	2028.4	2055.0	2050.8
27.5°	1920.5	1933.2	1979.6	2016.1	1992.6
30°	1870.7	1864.4	1903.6	1936.2	1954.3
32.5°	1781.8	1804.7	1850.5	1882.8	1865.6
35°	1727.8	1732.9	1773.0	1814.1	1812.8
37.5°	1633.4	1657.3	1713.6	1725.1	1714.5
40°	1552.9	1576.7	1627.7	1640.1	1634.9
42.5°	1493.5	1497.7	1541.5	1555.6	1533.0
45°	1390.1	1416.0	1439.5	1476.6	1441.7
47.5°	1302.0	1314.1	1364.8	1374.7	1356.3
50°	1222.1	1226.4	1277.3	1265.0	1252.9
52.5°	1121.7	1139.5	1168.2	1165.7	1151.6
55°	1039.1	1032.2	1059.3	1052.1	1051.8
57.5°	939.9	952.0	974.3	962.8	944.4
60°	847.0	847.3	855.5	842.5	840.1
62.5°	743.6	747.2	749.0	733.0	759.0
65°	638.4	629.9	654.6	629.6	633.8
67.5°	541.6	545.8	543.4	527.7	533.7
70°	443.3	448.7	444.8	427.0	432.4
72.5°	353.4	346.8	351.0	328.7	338.9
75°	265.7	260.2	265.1	246.4	254.8
77.5°	180.9	185.1	182.1	172.2	177.9
80°	119.4	116.1	116.1	110.4	111.6
82.5°	69.7	66.3	65.4	63.6	66.3
85°	32.6	31.7	32.3	31.4	30.2
87.5°	11.8	12.1	12.1	11.5	10.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)