

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: P590873

Luminaire Tested: FSR-24-2-LD4-4LO-50-UNV-80-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590873
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-50-UNV-80-88-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

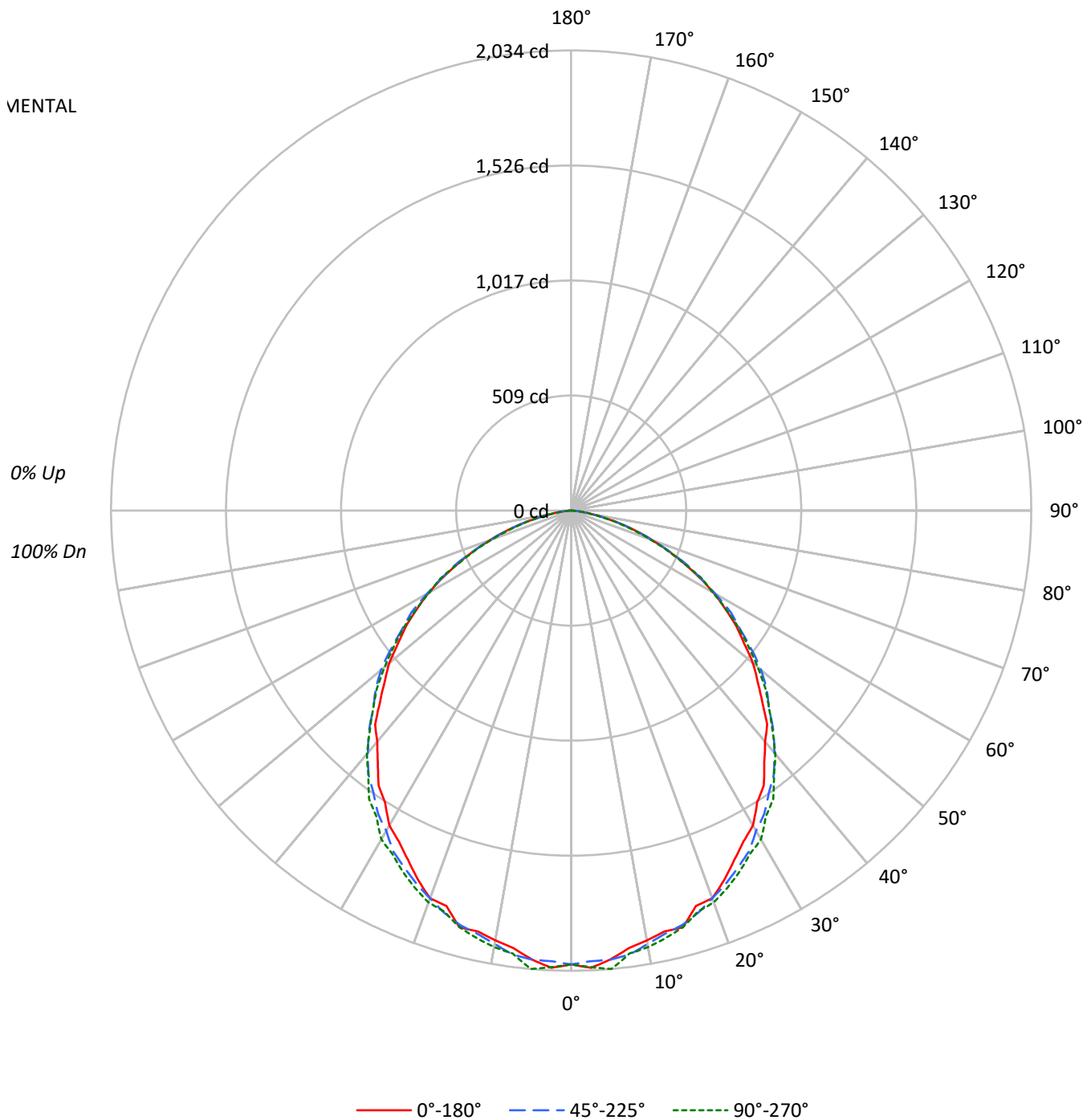
Lumens per Lamp: N/A
Luminaire Lumens: 5055.0 lumens
Efficiency: N/A
Efficacy: 108.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	5397	5397	5397
5°	5380	5381	5495
10°	5270	5316	5354
15°	5312	5283	5313
20°	5222	5222	5278
25°	5062	5173	5229
30°	4992	5080	5215
35°	4875	5002	5115
40°	4685	4911	4932
45°	4543	4705	4712
50°	4394	4593	4505
55°	4187	4268	4238
60°	3915	3954	3883
65°	3491	3580	3466
70°	2995	3006	2922
75°	2372	2366	2275
80°	1590	1545	1485
85°	865	855	800

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4826 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.7	3.7
10°-20°	534.7	10.6
20°-30°	801.1	15.8
30°-40°	949.5	18.8
40°-50°	951.2	18.8
50°-60°	807.4	16.0
60°-70°	544.4	10.8
70°-80°	239.2	4.7
80°-90°	38.9	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°	1524.5	30.2
0°-40°	2473.9	48.9
0°-60°	4232.6	83.7
0°-90°	5055.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5055.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2006	2006	2006	2006	2006	
5°	1992	1987	1992	1986	2034	188
15°	1907	1885	1896	1906	1907	531
25°	1705	1714	1742	1765	1761	788
35°	1484	1488	1523	1558	1557	921
45°	1194	1216	1236	1268	1238	924
55°	892	886	910	904	903	794
65°	548	541	562	541	544	545
75°	228	224	228	212	219	245
85°	28	27	28	27	26	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2005.7	2005.7	2005.7	2005.7	2005.7
2.5°	2023.0	2007.8	1993.5	2010.1	2020.2
5°	1991.5	1986.8	1992.2	1986.3	2034.2
7.5°	1950.5	1968.4	1978.8	1972.3	1975.1
10°	1928.8	1922.6	1945.6	1961.7	1959.3
12.5°	1905.5	1914.8	1916.1	1933.4	1935.0
15°	1906.8	1884.8	1896.4	1906.3	1907.0
17.5°	1832.7	1856.5	1864.6	1887.1	1859.1
20°	1823.6	1806.3	1823.6	1846.7	1843.1
22.5°	1768.0	1748.5	1785.8	1806.3	1805.0
25°	1704.8	1714.1	1742.1	1764.9	1761.2
27.5°	1649.4	1660.2	1700.1	1731.5	1711.3
30°	1606.6	1601.2	1634.9	1662.8	1678.4
32.5°	1530.2	1549.9	1589.3	1617.0	1602.2
35°	1483.9	1488.3	1522.7	1557.9	1556.9
37.5°	1402.8	1423.3	1471.7	1481.5	1472.5
40°	1333.7	1354.1	1397.9	1408.5	1404.1
42.5°	1282.7	1286.3	1323.8	1336.0	1316.6
45°	1193.8	1216.1	1236.3	1268.2	1238.1
47.5°	1118.2	1128.6	1172.1	1180.6	1164.8
50°	1049.6	1053.2	1097.0	1086.4	1076.0
52.5°	963.4	978.6	1003.2	1001.2	989.0
55°	892.4	886.4	909.7	903.5	903.3
57.5°	807.2	817.6	836.7	826.9	811.1
60°	727.4	727.7	734.7	723.6	721.5
62.5°	638.6	641.7	643.3	629.5	651.8
65°	548.2	541.0	562.2	540.7	544.3
67.5°	465.1	468.7	466.7	453.2	458.4
70°	380.7	385.3	382.0	366.7	371.4
72.5°	303.5	297.8	301.4	282.3	291.1
75°	228.1	223.5	227.6	211.6	218.8
77.5°	155.4	159.0	156.4	147.9	152.8
80°	102.6	99.7	99.7	94.8	95.8
82.5°	59.8	57.0	56.2	54.6	57.0
85°	28.0	27.2	27.7	26.9	25.9
87.5°	10.1	10.4	10.4	9.8	9.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)