

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: P590809

Luminaire Tested: FSR-24-2-LD4-4LO-35-UNV-80-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590809
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-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

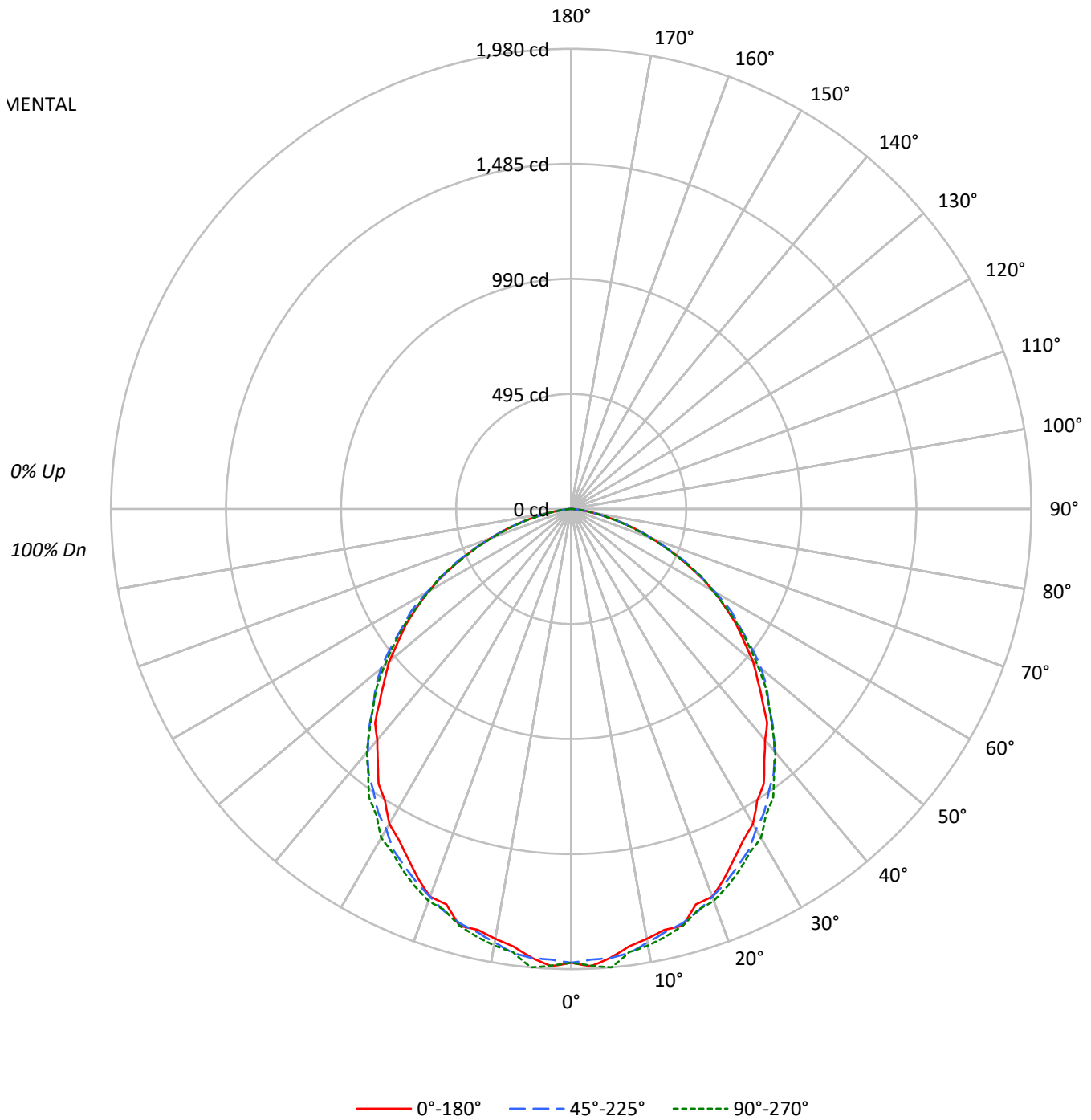
Lumens per Lamp: N/A
Luminaire Lumens: 4921.0 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	5254	5254	5254
5°	5237	5239	5349
10°	5131	5175	5212
15°	5171	5143	5172
20°	5084	5084	5138
25°	4928	5035	5091
30°	4860	4945	5077
35°	4745	4870	4979
40°	4561	4780	4802
45°	4423	4580	4587
50°	4278	4471	4385
55°	4076	4155	4125
60°	3812	3849	3780
65°	3398	3485	3374
70°	2916	2926	2844
75°	2309	2304	2215
80°	1547	1505	1446
85°	840	834	778

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4698 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.7	3.7
10°-20°	520.5	10.6
20°-30°	779.9	15.8
30°-40°	924.3	18.8
40°-50°	926.0	18.8
50°-60°	786.0	16.0
60°-70°	529.9	10.8
70°-80°	232.9	4.7
80°-90°	37.9	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°	1484.0	30.2
0°-40°	2408.3	48.9
0°-60°	4120.4	83.7
0°-90°	4921.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4921.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1952	1952	1952	1952	1952	
5°	1939	1934	1939	1934	1980	183
15°	1856	1835	1846	1856	1856	517
25°	1660	1669	1696	1718	1714	767
35°	1444	1449	1482	1517	1516	897
45°	1162	1184	1204	1234	1205	899
55°	869	863	886	880	879	773
65°	534	527	547	526	530	531
75°	222	218	222	206	213	238
85°	27	26	27	26	25	39
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1952.5	1952.5	1952.5	1952.5	1952.5
2.5°	1969.4	1954.5	1940.7	1956.8	1966.6
5°	1938.7	1934.1	1939.4	1933.6	1980.3
7.5°	1898.8	1916.2	1926.3	1920.0	1922.8
10°	1877.7	1871.6	1894.0	1909.7	1907.4
12.5°	1855.0	1864.0	1865.3	1882.2	1883.7
15°	1856.2	1834.8	1846.1	1855.7	1856.5
17.5°	1784.1	1807.3	1815.1	1837.1	1809.8
20°	1775.3	1758.4	1775.3	1797.7	1794.2
22.5°	1721.1	1702.2	1738.5	1758.4	1757.1
25°	1659.6	1668.7	1695.9	1718.1	1714.5
27.5°	1605.6	1616.2	1655.0	1685.6	1665.9
30°	1564.0	1558.7	1591.5	1618.7	1633.9
32.5°	1489.7	1508.8	1547.1	1574.1	1559.8
35°	1444.5	1448.8	1482.4	1516.6	1515.6
37.5°	1365.6	1385.6	1432.7	1442.3	1433.5
40°	1298.3	1318.2	1360.8	1371.2	1366.9
42.5°	1248.7	1252.2	1288.7	1300.6	1281.7
45°	1162.2	1183.9	1203.5	1234.5	1205.3
47.5°	1088.6	1098.7	1141.0	1149.3	1134.0
50°	1021.8	1025.3	1067.9	1057.6	1047.5
52.5°	937.8	952.7	976.6	974.6	962.8
55°	868.7	862.9	885.6	879.6	879.3
57.5°	785.8	795.9	814.5	805.0	789.6
60°	708.2	708.4	715.2	704.4	702.4
62.5°	621.7	624.7	626.2	612.9	634.5
65°	533.7	526.6	547.3	526.4	529.9
67.5°	452.8	456.3	454.3	441.2	446.2
70°	370.6	375.1	371.9	357.0	361.5
72.5°	295.5	289.9	293.4	274.8	283.4
75°	222.1	217.6	221.6	206.0	213.0
77.5°	151.3	154.8	152.3	144.0	148.7
80°	99.8	97.1	97.1	92.3	93.3
82.5°	58.2	55.5	54.7	53.2	55.5
85°	27.2	26.5	27.0	26.2	25.2
87.5°	9.8	10.1	10.1	9.6	9.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)