

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: P561660

Luminaire Tested: FSR-12-4-LD4-2LO-50-UNV-80-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561660
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-4-LD4-2LO-50-UNV-80-96-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4394.0 lumens
Efficiency: N/A
Efficacy: 93.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

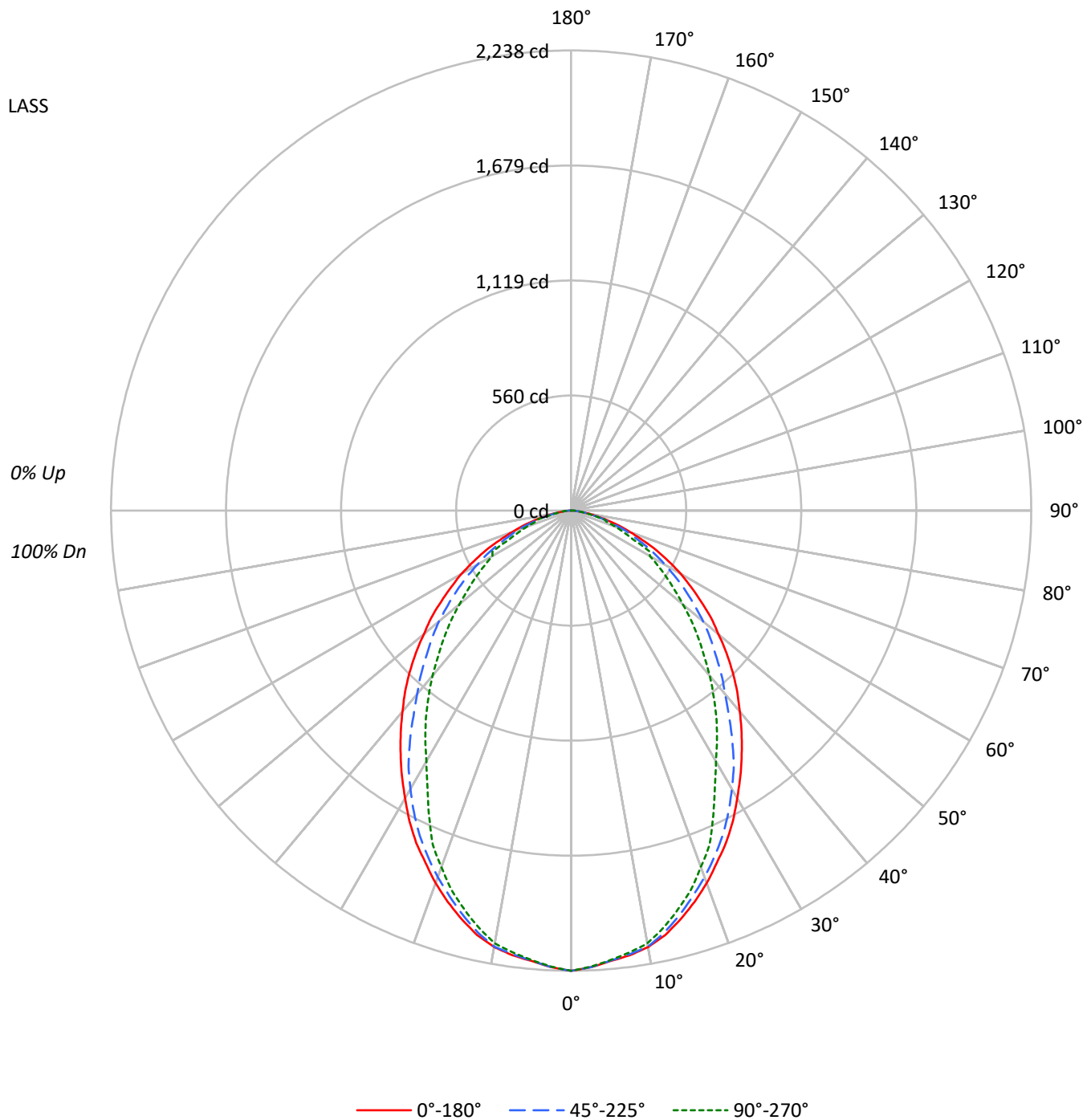
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6023	6023	6023
5°	5941	5934	5927
10°	5890	5883	5840
15°	5731	5673	5594
20°	5520	5432	5283
25°	5293	5178	4855
30°	5017	4856	4374
35°	4752	4488	4046
40°	4481	4090	3681
45°	4225	3781	3328
50°	3911	3510	2968
55°	3618	3180	2659
60°	3314	2841	2382
65°	2916	2488	2109
70°	2402	2179	1792
75°	1910	1668	1749
80°	1283	1203	1124
85°	800	960	1118

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4225 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	208.3	4.7
10°-20°	571.8	13.0
20°-30°	791.6	18.0
30°-40°	844.1	19.2
40°-50°	770.1	17.5
50°-60°	603.3	13.7
60°-70°	393.2	8.9
70°-80°	174.2	4.0
80°-90°	37.4	0.9
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°	1571.8	35.8
0°-40°	2415.9	55.0
0°-60°	3789.2	86.2
0°-90°	4394.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4394.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2238	2238	2238	2238	2238	
5°	2199	2197	2197	2194	2194	209
15°	2057	2057	2036	2016	2008	578
25°	1783	1772	1744	1682	1635	818
35°	1446	1436	1366	1263	1232	904
45°	1110	1087	994	911	875	855
55°	771	748	678	598	567	692
65°	458	432	391	398	331	451
75°	184	171	160	153	168	197
85°	26	28	31	34	36	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2238.2	2238.2	2238.2	2238.2	2238.2
2.5°	2222.7	2222.7	2222.7	2220.1	2220.1
5°	2199.4	2196.8	2196.8	2194.3	2194.3
7.5°	2181.3	2178.7	2176.1	2173.6	2168.4
10°	2155.4	2155.4	2152.9	2139.9	2137.3
12.5°	2114.0	2111.5	2101.1	2083.0	2077.8
15°	2057.1	2057.1	2036.4	2015.7	2008.0
17.5°	1995.0	1992.4	1966.6	1945.8	1935.5
20°	1927.7	1922.6	1896.7	1863.0	1844.9
22.5°	1852.7	1852.7	1821.6	1777.7	1759.5
25°	1782.8	1772.5	1744.0	1681.9	1635.3
27.5°	1702.6	1687.1	1656.0	1568.1	1513.7
30°	1614.6	1606.9	1562.9	1449.0	1407.6
32.5°	1531.8	1518.9	1472.3	1353.3	1319.7
35°	1446.4	1436.1	1366.2	1262.7	1231.7
37.5°	1361.1	1348.1	1260.1	1177.3	1138.5
40°	1275.7	1260.1	1164.4	1089.4	1048.0
42.5°	1195.5	1174.8	1081.6	1001.4	954.8
45°	1110.1	1086.8	993.6	910.8	874.6
47.5°	1024.7	1004.0	918.6	833.2	791.8
50°	934.1	916.0	838.4	753.0	709.0
52.5°	859.1	830.6	755.6	670.2	634.0
55°	771.1	747.8	677.9	597.7	566.7
57.5°	690.9	667.6	602.9	527.9	502.0
60°	615.8	582.2	527.9	463.2	442.5
62.5°	533.0	507.2	460.6	406.2	432.1
65°	458.0	432.1	390.7	398.5	331.2
67.5°	375.2	362.3	326.0	289.8	279.5
70°	305.3	289.8	276.9	238.1	227.7
72.5°	243.2	227.7	209.6	188.9	181.1
75°	183.7	170.8	160.4	152.7	168.2
77.5°	126.8	121.6	113.9	106.1	103.5
80°	82.8	80.2	77.6	75.0	72.5
82.5°	49.2	49.2	49.2	49.2	49.2
85°	25.9	28.5	31.1	33.6	36.2
87.5°	15.5	15.5	18.1	20.7	23.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)