

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: P560883

Luminaire Tested: FSR-12-4-LD4-1HI-50-UNV-80-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560883
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-LD4-1HI-50-UNV-80-85-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4101.0 lumens
Efficiency: N/A
Efficacy: 94.9 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

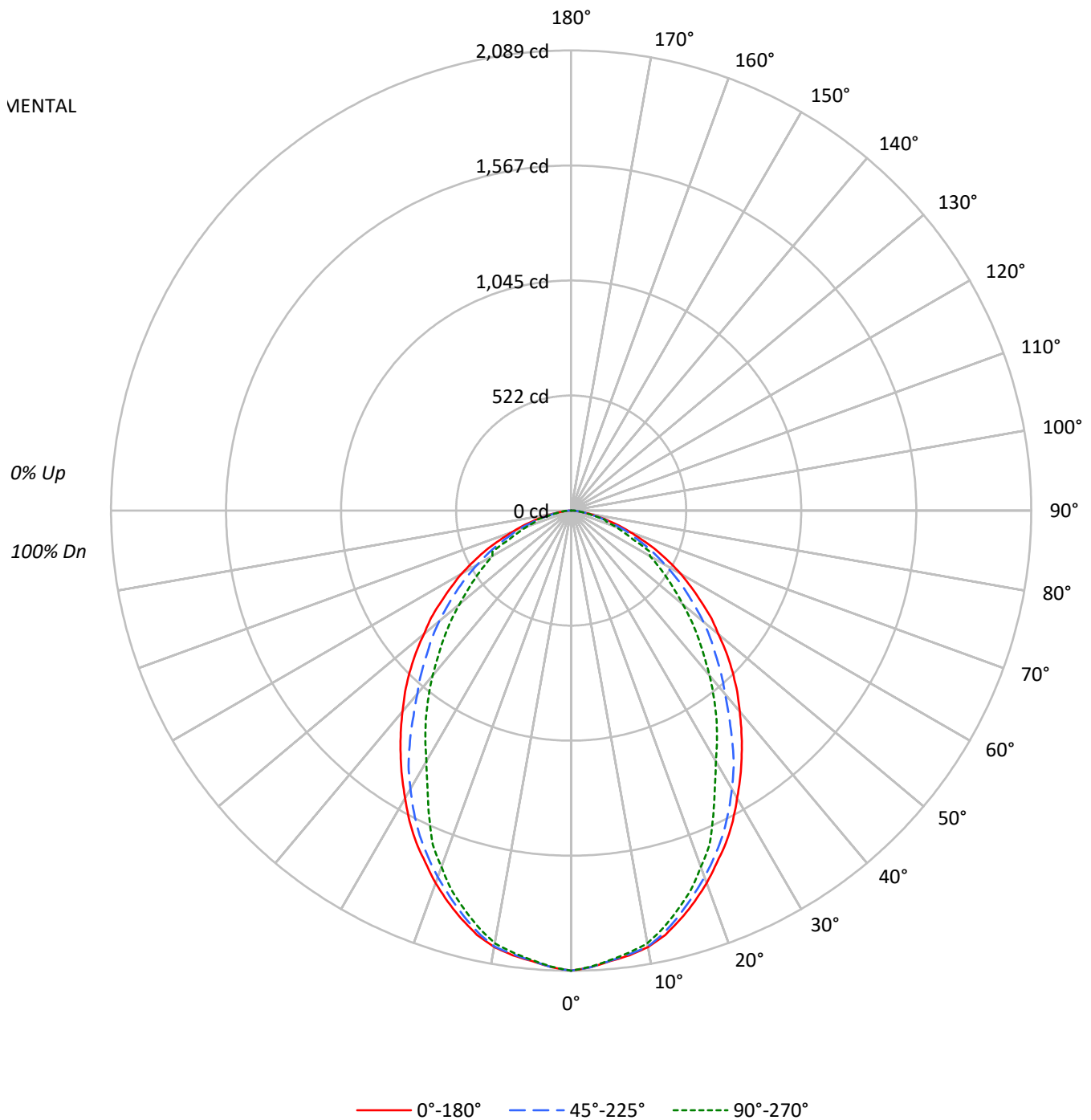
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	100	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5621	5621	5621
5°	5545	5539	5532
10°	5497	5490	5451
15°	5349	5295	5221
20°	5152	5069	4931
25°	4941	4833	4532
30°	4683	4533	4082
35°	4435	4189	3777
40°	4182	3818	3436
45°	3943	3529	3107
50°	3650	3276	2770
55°	3377	2968	2481
60°	3094	2652	2223
65°	2722	2322	1968
70°	2242	2033	1672
75°	1783	1556	1632
80°	1198	1124	1048
85°	747	895	1044

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3943 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	194.5	4.7
10°-20°	533.7	13.0
20°-30°	738.8	18.0
30°-40°	787.8	19.2
40°-50°	718.7	17.5
50°-60°	563.1	13.7
60°-70°	367.0	8.9
70°-80°	162.6	4.0
80°-90°	34.9	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°	1467.0	35.8
0°-40°	2254.8	55.0
0°-60°	3536.5	86.2
0°-90°	4101.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4101.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2089	2089	2089	2089	2089	
5°	2053	2050	2050	2048	2048	195
15°	1920	1920	1901	1881	1874	540
25°	1664	1654	1628	1570	1526	764
35°	1350	1340	1275	1178	1150	844
45°	1036	1014	927	850	816	798
55°	720	698	633	558	529	646
65°	428	403	365	372	309	421
75°	172	159	150	142	157	184
85°	24	27	29	31	34	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2089.0	2089.0	2089.0	2089.0	2089.0
2.5°	2074.5	2074.5	2074.5	2072.1	2072.1
5°	2052.8	2050.4	2050.4	2047.9	2047.9
7.5°	2035.9	2033.4	2031.0	2028.6	2023.8
10°	2011.7	2011.7	2009.3	1997.2	1994.8
12.5°	1973.1	1970.7	1961.0	1944.1	1939.3
15°	1919.9	1919.9	1900.6	1881.3	1874.1
17.5°	1862.0	1859.6	1835.4	1816.1	1806.4
20°	1799.2	1794.4	1770.2	1738.8	1721.9
22.5°	1729.2	1729.2	1700.2	1659.1	1642.2
25°	1664.0	1654.3	1627.7	1569.8	1526.3
27.5°	1589.1	1574.6	1545.6	1463.5	1412.8
30°	1507.0	1499.7	1458.7	1352.4	1313.8
32.5°	1429.7	1417.6	1374.1	1263.1	1231.7
35°	1350.0	1340.3	1275.1	1178.5	1149.6
37.5°	1270.3	1258.2	1176.1	1098.8	1062.6
40°	1190.6	1176.1	1086.8	1016.7	978.1
42.5°	1115.7	1096.4	1009.5	934.6	891.1
45°	1036.0	1014.3	927.4	850.1	816.3
47.5°	956.3	937.0	857.3	777.6	739.0
50°	871.8	854.9	782.5	702.8	661.7
52.5°	801.8	775.2	705.2	625.5	591.7
55°	719.7	697.9	632.7	557.9	528.9
57.5°	644.8	623.1	562.7	492.7	468.5
60°	574.8	543.4	492.7	432.3	413.0
62.5°	497.5	473.3	429.9	379.2	403.3
65°	427.5	403.3	364.7	371.9	309.1
67.5°	350.2	338.1	304.3	270.5	260.8
70°	285.0	270.5	258.4	222.2	212.5
72.5°	227.0	212.5	195.6	176.3	169.1
75°	171.5	159.4	149.7	142.5	157.0
77.5°	118.3	113.5	106.3	99.0	96.6
80°	77.3	74.9	72.5	70.0	67.6
82.5°	45.9	45.9	45.9	45.9	45.9
85°	24.2	26.6	29.0	31.4	33.8
87.5°	14.5	14.5	16.9	19.3	21.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)