

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: P561978

Luminaire Tested: FSR-24-4-LD4-1HI-35-UNV-80-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561978
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-24-4-LD4-1HI-35-UNV-80-94-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4014.0 lumens
Efficiency: N/A
Efficacy: 92.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

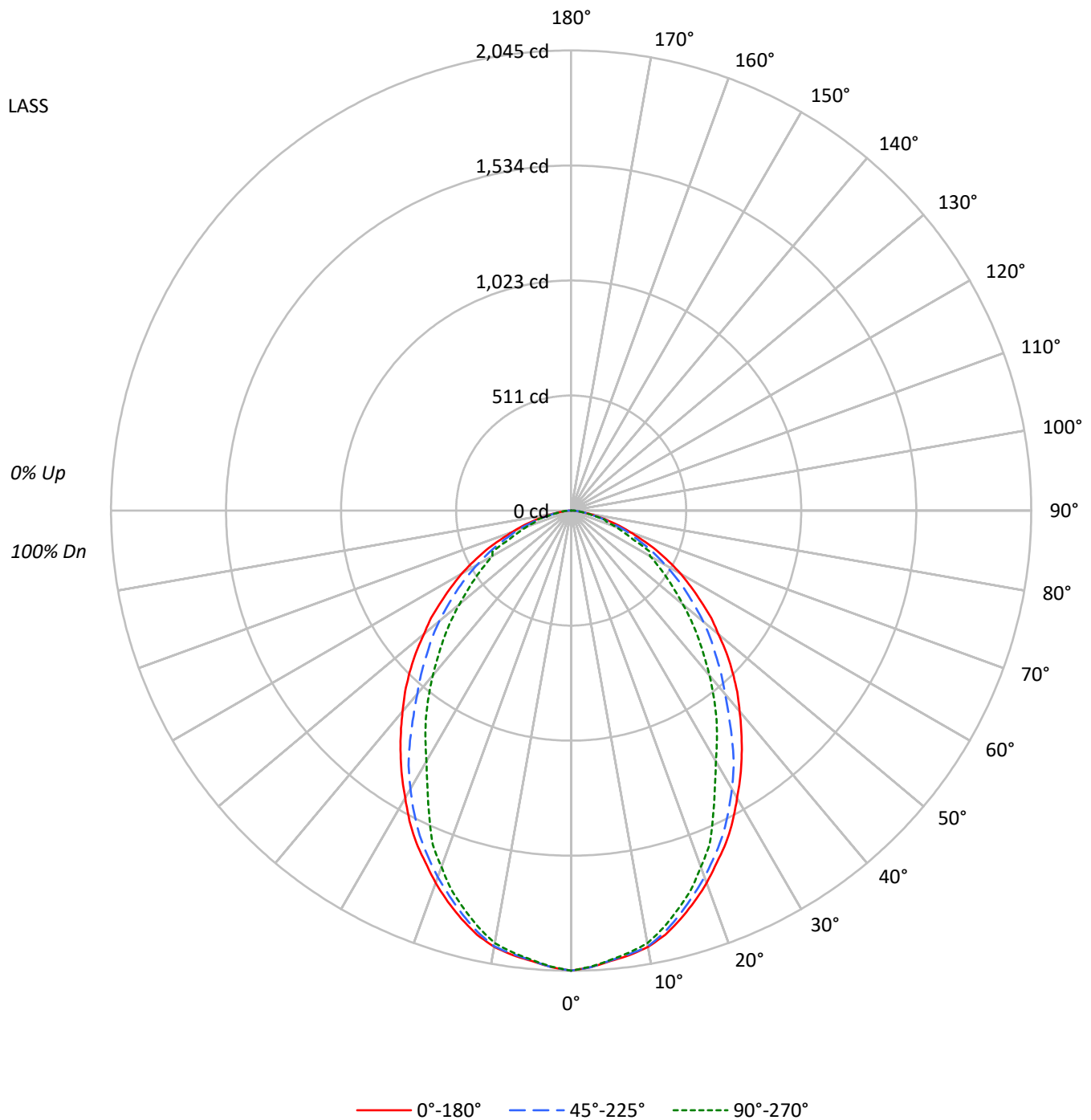
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2751	2751	2751
5°	2714	2711	2707
10°	2690	2687	2668
15°	2618	2591	2555
20°	2521	2481	2413
25°	2418	2365	2218
30°	2292	2218	1998
35°	2170	2050	1848
40°	2047	1868	1681
45°	1930	1727	1520
50°	1786	1603	1356
55°	1652	1453	1214
60°	1514	1298	1088
65°	1332	1136	963
70°	1097	995	818
75°	872	762	799
80°	586	549	513
85°	364	438	511

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1930 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.3	4.7
10°-20°	522.4	13.0
20°-30°	723.2	18.0
30°-40°	771.1	19.2
40°-50°	703.5	17.5
50°-60°	551.1	13.7
60°-70°	359.2	8.9
70°-80°	159.1	4.0
80°-90°	34.2	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°	1435.8	35.8
0°-40°	2206.9	55.0
0°-60°	3461.5	86.2
0°-90°	4014.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4014.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2045	2045	2045	2045	2045	
5°	2009	2007	2007	2004	2004	191
15°	1879	1879	1860	1841	1834	528
25°	1629	1619	1593	1536	1494	748
35°	1321	1312	1248	1154	1125	826
45°	1014	993	908	832	799	781
55°	704	683	619	546	518	632
65°	418	395	357	364	303	412
75°	168	156	147	140	154	180
85°	24	26	28	31	33	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2044.7	2044.7	2044.7	2044.7	2044.7
2.5°	2030.5	2030.5	2030.5	2028.1	2028.1
5°	2009.2	2006.9	2006.9	2004.5	2004.5
7.5°	1992.7	1990.3	1987.9	1985.6	1980.9
10°	1969.0	1969.0	1966.7	1954.9	1952.5
12.5°	1931.2	1928.9	1919.4	1902.9	1898.1
15°	1879.2	1879.2	1860.3	1841.4	1834.3
17.5°	1822.5	1820.1	1796.5	1777.6	1768.1
20°	1761.0	1756.3	1732.7	1701.9	1685.4
22.5°	1692.5	1692.5	1664.1	1623.9	1607.4
25°	1628.7	1619.2	1593.2	1536.5	1493.9
27.5°	1555.4	1541.2	1512.8	1432.5	1382.8
30°	1475.0	1467.9	1427.7	1323.7	1285.9
32.5°	1399.4	1387.5	1345.0	1236.3	1205.5
35°	1321.4	1311.9	1248.1	1153.5	1125.2
37.5°	1243.4	1231.5	1151.2	1075.5	1040.1
40°	1165.3	1151.2	1063.7	995.2	957.3
42.5°	1092.1	1073.2	988.1	914.8	872.2
45°	1014.1	992.8	907.7	832.1	799.0
47.5°	936.1	917.2	839.1	761.1	723.3
50°	853.3	836.8	765.9	687.9	647.7
52.5°	784.8	758.8	690.2	612.2	579.1
55°	704.4	683.1	619.3	546.0	517.7
57.5°	631.1	609.9	550.8	482.2	458.6
60°	562.6	531.9	482.2	423.1	404.2
62.5°	486.9	463.3	420.8	371.1	394.8
65°	418.4	394.8	356.9	364.0	302.6
67.5°	342.7	330.9	297.8	264.7	255.3
70°	278.9	264.7	252.9	217.5	208.0
72.5°	222.2	208.0	191.5	172.6	165.5
75°	167.8	156.0	146.6	139.5	153.6
77.5°	115.8	111.1	104.0	96.9	94.6
80°	75.6	73.3	70.9	68.5	66.2
82.5°	44.9	44.9	44.9	44.9	44.9
85°	23.6	26.0	28.4	30.7	33.1
87.5°	14.2	14.2	16.5	18.9	21.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)