

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: P563322

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-80-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563322
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-LD4-3LO-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7436.0 lumens
Efficiency: N/A
Efficacy: 105.9 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

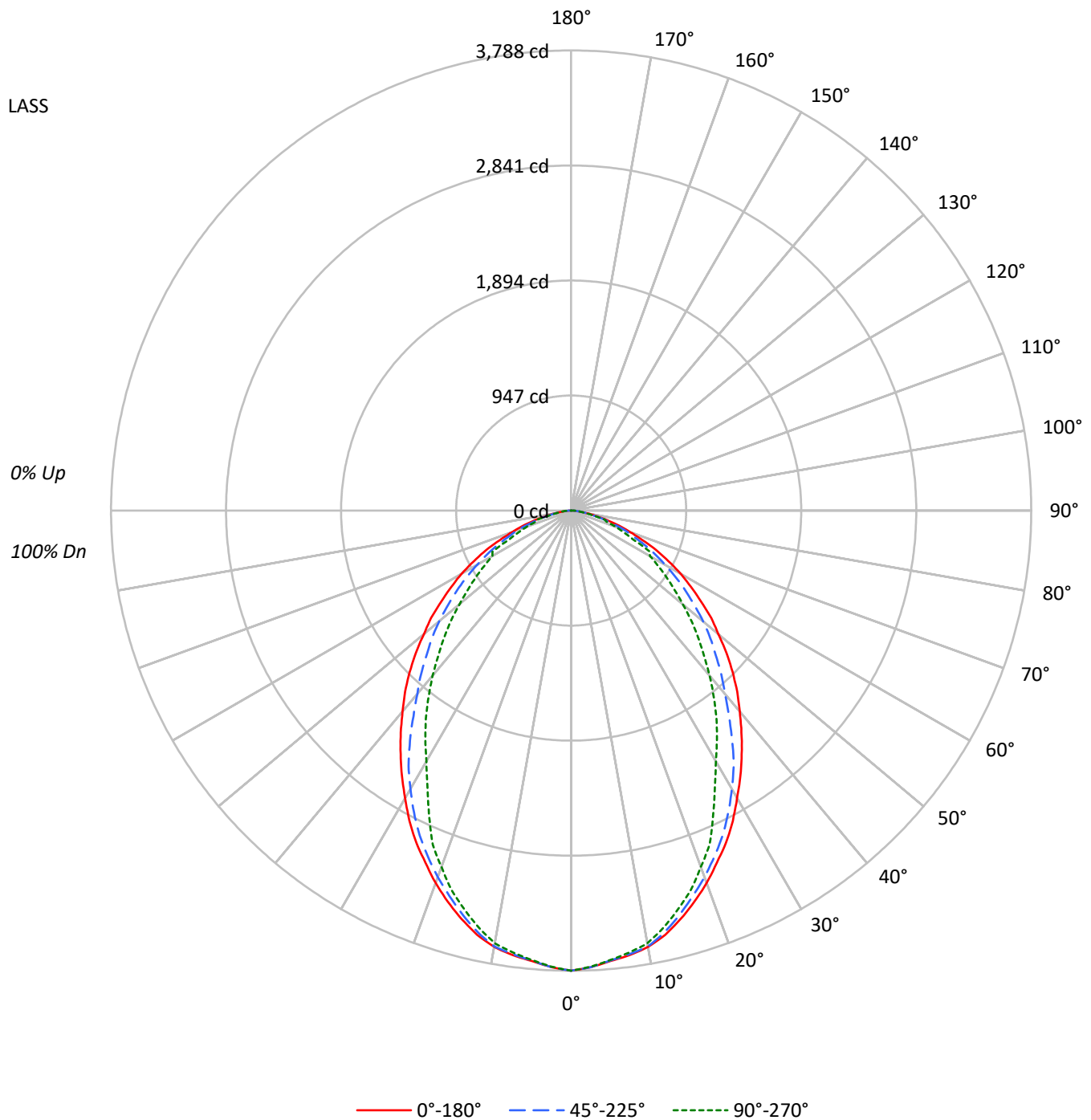
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5096	5096	5096
5°	5027	5021	5015
10°	4984	4978	4942
15°	4849	4800	4733
20°	4671	4596	4470
25°	4479	4382	4109
30°	4245	4109	3701
35°	4021	3798	3424
40°	3792	3461	3115
45°	3575	3200	2816
50°	3309	2970	2511
55°	3061	2691	2250
60°	2805	2404	2015
65°	2468	2105	1784
70°	2033	1843	1516
75°	1616	1411	1480
80°	1086	1018	950
85°	676	810	946

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3575 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	352.6	4.7
10°-20°	967.7	13.0
20°-30°	1339.7	18.0
30°-40°	1428.5	19.2
40°-50°	1303.2	17.5
50°-60°	1020.9	13.7
60°-70°	665.4	8.9
70°-80°	294.8	4.0
80°-90°	63.3	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°	2659.9	35.8
0°-40°	4088.4	55.0
0°-60°	6412.5	86.2
0°-90°	7436.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7436.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3788	3788	3788	3788	3788	
5°	3722	3718	3718	3713	3713	353
15°	3481	3481	3446	3411	3398	979
25°	3017	3000	2951	2846	2768	1385
35°	2448	2430	2312	2137	2084	1530
45°	1879	1839	1682	1541	1480	1447
55°	1305	1266	1147	1012	959	1170
65°	775	731	661	674	560	764
75°	311	289	272	258	285	333
85°	44	48	52	57	61	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3787.8	3787.8	3787.8	3787.8	3787.8
2.5°	3761.5	3761.5	3761.5	3757.1	3757.1
5°	3722.1	3717.7	3717.7	3713.4	3713.4
7.5°	3691.5	3687.1	3682.7	3678.3	3669.6
10°	3647.7	3647.7	3643.3	3621.4	3617.0
12.5°	3577.6	3573.2	3555.7	3525.1	3516.3
15°	3481.3	3481.3	3446.2	3411.2	3398.1
17.5°	3376.2	3371.8	3328.0	3293.0	3275.5
20°	3262.3	3253.6	3209.8	3152.9	3122.2
22.5°	3135.3	3135.3	3082.8	3008.3	2977.7
25°	3017.1	2999.6	2951.4	2846.3	2767.5
27.5°	2881.4	2855.1	2802.5	2653.6	2561.7
30°	2732.5	2719.3	2644.9	2452.2	2382.2
32.5°	2592.3	2570.4	2491.6	2290.2	2233.3
35°	2447.8	2430.3	2312.1	2136.9	2084.4
37.5°	2303.3	2281.4	2132.6	1992.4	1926.7
40°	2158.8	2132.6	1970.5	1843.5	1773.5
42.5°	2023.1	1988.0	1830.4	1694.7	1615.8
45°	1878.6	1839.2	1681.5	1541.4	1480.1
47.5°	1734.1	1699.0	1554.5	1410.0	1340.0
50°	1580.8	1550.2	1418.8	1274.3	1199.8
52.5°	1453.8	1405.6	1278.7	1134.2	1072.8
55°	1304.9	1265.5	1147.3	1011.5	959.0
57.5°	1169.2	1129.8	1020.3	893.3	849.5
60°	1042.2	985.3	893.3	783.8	748.8
62.5°	902.1	858.3	779.5	687.5	731.3
65°	775.1	731.3	661.2	674.4	560.5
67.5°	634.9	613.1	551.7	490.4	472.9
70°	516.7	490.4	468.5	402.9	385.3
72.5°	411.6	385.3	354.7	319.7	306.5
75°	310.9	289.0	271.5	258.4	284.6
77.5°	214.6	205.8	192.7	179.5	175.2
80°	140.1	135.7	131.4	127.0	122.6
82.5°	83.2	83.2	83.2	83.2	83.2
85°	43.8	48.2	52.5	56.9	61.3
87.5°	26.3	26.3	30.7	35.0	39.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)