

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: P563517

Luminaire Tested: FSR-24-4-LD4-3STD-40-UNV-80-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563517
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-LD4-3STD-40-UNV-80-96-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11721.0 lumens
Efficiency: N/A
Efficacy: 117.3 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

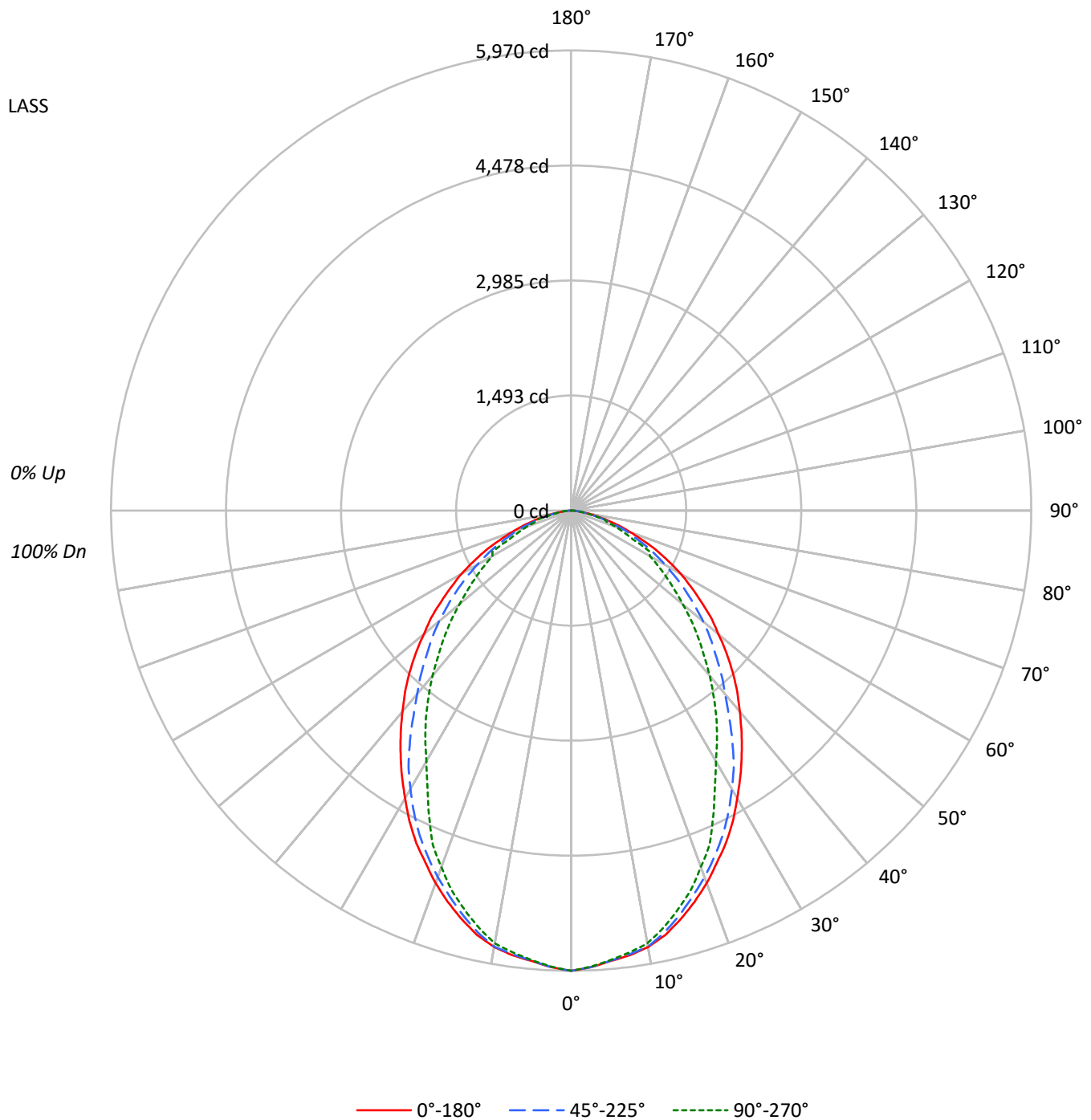
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8033	8033	8033
5°	7924	7915	7906
10°	7855	7846	7789
15°	7644	7567	7461
20°	7363	7244	7047
25°	7060	6907	6476
30°	6692	6477	5834
35°	6338	5986	5397
40°	5977	5456	4910
45°	5634	5043	4439
50°	5216	4681	3959
55°	4825	4242	3546
60°	4421	3789	3176
65°	3890	3318	2813
70°	3204	2905	2389
75°	2548	2224	2333
80°	1712	1605	1498
85°	1065	1278	1491

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5634 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	555.8	4.7
10°-20°	1525.3	13.0
20°-30°	2111.6	18.0
30°-40°	2251.6	19.2
40°-50°	2054.1	17.5
50°-60°	1609.3	13.7
60°-70°	1048.8	8.9
70°-80°	464.7	4.0
80°-90°	99.7	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°	4192.7	35.8
0°-40°	6444.3	55.0
0°-60°	10107.7	86.2
0°-90°	11721.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11721.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5970	5970	5970	5970	5970	
5°	5867	5860	5860	5853	5853	557
15°	5487	5487	5432	5377	5356	1543
25°	4756	4728	4652	4486	4362	2183
35°	3858	3831	3644	3368	3286	2412
45°	2961	2899	2650	2430	2333	2281
55°	2057	1995	1808	1594	1512	1845
65°	1222	1153	1042	1063	884	1204
75°	490	456	428	407	449	525
85°	69	76	83	90	97	96
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5970.5	5970.5	5970.5	5970.5	5970.5
2.5°	5929.1	5929.1	5929.1	5922.2	5922.2
5°	5867.0	5860.1	5860.1	5853.2	5853.2
7.5°	5818.7	5811.8	5804.9	5798.0	5784.2
10°	5749.6	5749.6	5742.7	5708.2	5701.3
12.5°	5639.2	5632.3	5604.7	5556.4	5542.6
15°	5487.4	5487.4	5432.1	5376.9	5356.2
17.5°	5321.7	5314.8	5245.8	5190.6	5162.9
20°	5142.2	5128.4	5059.4	4969.7	4921.4
22.5°	4942.1	4942.1	4859.2	4741.9	4693.6
25°	4755.7	4728.1	4652.2	4486.5	4362.3
27.5°	4541.7	4500.3	4417.5	4182.8	4037.9
30°	4307.1	4286.4	4169.0	3865.3	3754.9
32.5°	4086.2	4051.7	3927.4	3609.9	3520.2
35°	3858.4	3830.8	3644.4	3368.3	3285.5
37.5°	3630.6	3596.1	3361.4	3140.6	3037.0
40°	3402.9	3361.4	3106.1	2905.9	2795.4
42.5°	3188.9	3133.7	2885.2	2671.2	2547.0
45°	2961.1	2899.0	2650.5	2429.6	2333.0
47.5°	2733.3	2678.1	2450.3	2222.6	2112.1
50°	2491.7	2443.4	2236.4	2008.6	1891.2
52.5°	2291.6	2215.6	2015.5	1787.7	1691.1
55°	2056.9	1994.8	1808.4	1594.4	1511.6
57.5°	1842.9	1780.8	1608.2	1408.1	1339.1
60°	1642.8	1553.0	1408.1	1235.5	1180.3
62.5°	1421.9	1352.9	1228.6	1083.7	1152.7
65°	1221.7	1152.7	1042.3	1063.0	883.5
67.5°	1000.8	966.3	869.7	773.1	745.5
70°	814.5	773.1	738.5	635.0	607.4
72.5°	648.8	607.4	559.1	503.9	483.2
75°	490.1	455.6	427.9	407.2	448.7
77.5°	338.2	324.4	303.7	283.0	276.1
80°	220.9	214.0	207.1	200.2	193.3
82.5°	131.1	131.1	131.1	131.1	131.1
85°	69.0	75.9	82.8	89.7	96.6
87.5°	41.4	41.4	48.3	55.2	62.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)