

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: P563131

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563131
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-LD4-3HI-40-UNV-80-94-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 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: 14537.0 lumens
Efficiency: N/A
Efficacy: 112.2 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

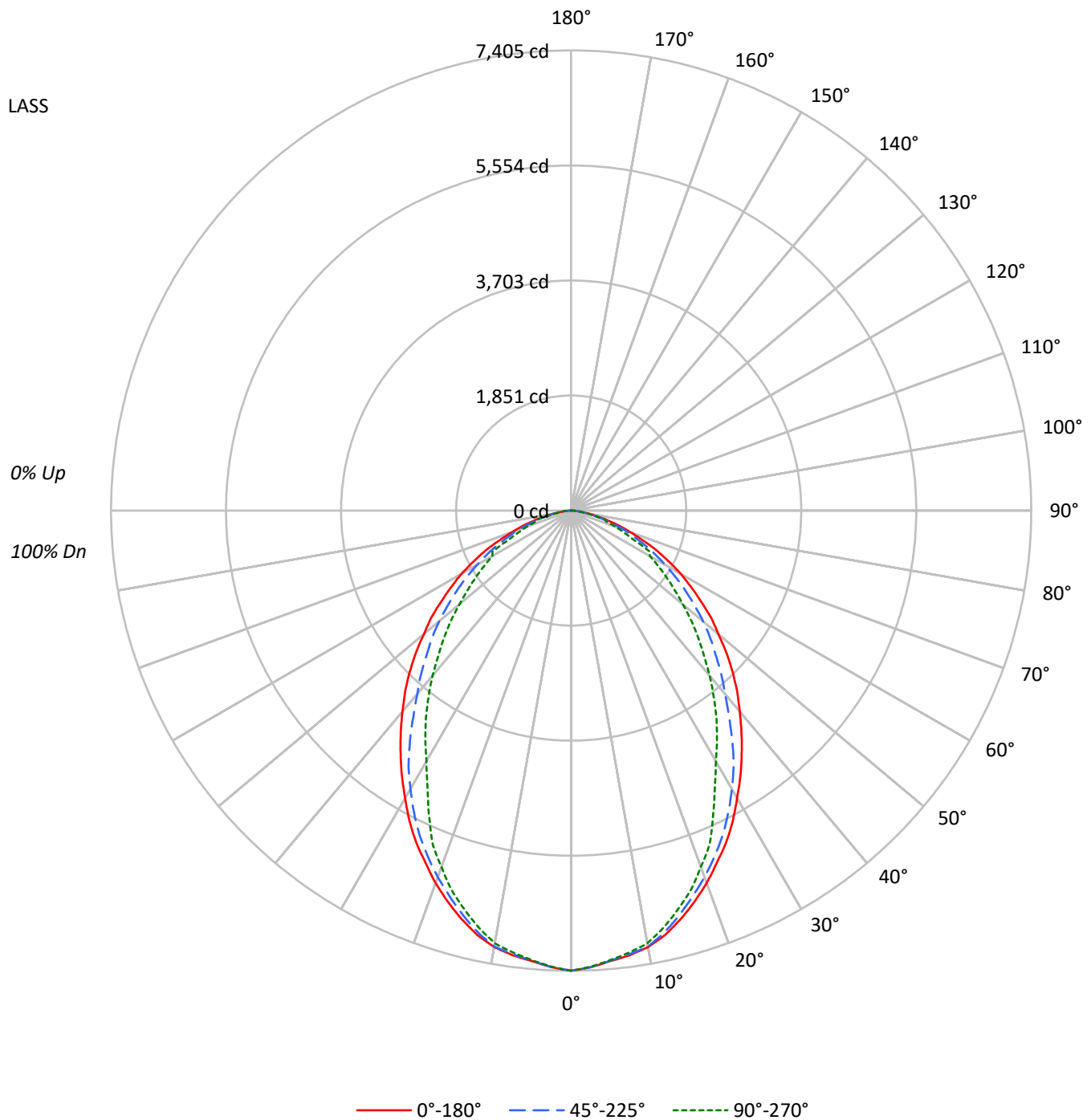
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9963	9963	9963
5°	9828	9816	9805
10°	9743	9731	9661
15°	9480	9385	9254
20°	9132	8985	8740
25°	8757	8566	8032
30°	8299	8033	7235
35°	7860	7424	6693
40°	7413	6766	6090
45°	6988	6255	5506
50°	6469	5806	4910
55°	5984	5261	4398
60°	5483	4700	3939
65°	4824	4116	3489
70°	3974	3603	2963
75°	3160	2759	2892
80°	2122	1990	1857
85°	1321	1585	1849

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6988 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	689.3	4.7
10°-20°	1891.7	13.0
20°-30°	2619.0	18.0
30°-40°	2792.6	19.2
40°-50°	2547.6	17.5
50°-60°	1995.9	13.7
60°-70°	1300.8	8.9
70°-80°	576.3	4.0
80°-90°	123.8	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°	5200.0	35.8
0°-40°	7992.6	55.0
0°-60°	12536.1	86.2
0°-90°	14537.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14537.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7405	7405	7405	7405	7405	
5°	7276	7268	7268	7259	7259	691
15°	6806	6806	6737	6669	6643	1913
25°	5898	5864	5770	5564	5410	2708
35°	4785	4751	4520	4178	4075	2992
45°	3672	3596	3287	3013	2894	2829
55°	2551	2474	2243	1978	1875	2288
65°	1515	1430	1293	1318	1096	1493
75°	608	565	531	505	556	651
85°	86	94	103	111	120	119
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7405.0	7405.0	7405.0	7405.0	7405.0
2.5°	7353.6	7353.6	7353.6	7345.0	7345.0
5°	7276.5	7268.0	7268.0	7259.4	7259.4
7.5°	7216.6	7208.1	7199.5	7190.9	7173.8
10°	7131.0	7131.0	7122.5	7079.6	7071.1
12.5°	6994.0	6985.5	6951.2	6891.3	6874.2
15°	6805.7	6805.7	6737.2	6668.7	6643.1
17.5°	6600.3	6591.7	6506.1	6437.6	6403.4
20°	6377.7	6360.6	6274.9	6163.7	6103.7
22.5°	6129.4	6129.4	6026.7	5881.2	5821.2
25°	5898.3	5864.0	5769.9	5564.4	5410.3
27.5°	5632.9	5581.5	5478.8	5187.7	5008.0
30°	5341.8	5316.2	5170.6	4794.0	4657.0
32.5°	5067.9	5025.1	4871.0	4477.2	4365.9
35°	4785.4	4751.2	4520.0	4177.6	4074.9
37.5°	4502.9	4460.1	4169.0	3895.1	3766.7
40°	4220.4	4169.0	3852.3	3604.0	3467.1
42.5°	3955.0	3886.5	3578.3	3313.0	3158.9
45°	3672.5	3595.5	3287.3	3013.3	2893.5
47.5°	3390.0	3321.5	3039.0	2756.5	2619.6
50°	3090.4	3030.5	2773.6	2491.1	2345.6
52.5°	2842.1	2748.0	2499.7	2217.2	2097.4
55°	2551.1	2474.0	2242.9	1977.5	1874.8
57.5°	2285.7	2208.6	1994.6	1746.4	1660.8
60°	2037.4	1926.1	1746.4	1532.4	1463.9
62.5°	1763.5	1677.9	1523.8	1344.0	1429.6
65°	1515.2	1429.6	1292.7	1318.3	1095.8
67.5°	1241.3	1198.5	1078.6	958.8	924.5
70°	1010.2	958.8	916.0	787.6	753.3
72.5°	804.7	753.3	693.4	624.9	599.2
75°	607.8	565.0	530.8	505.1	556.4
77.5°	419.5	402.4	376.7	351.0	342.4
80°	273.9	265.4	256.8	248.3	239.7
82.5°	162.7	162.7	162.7	162.7	162.7
85°	85.6	94.2	102.7	111.3	119.8
87.5°	51.4	51.4	59.9	68.5	77.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)