

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: P563706

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563706
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-LD4-4HI-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: 16286.0 lumens
Efficiency: N/A
Efficacy: 94.2 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

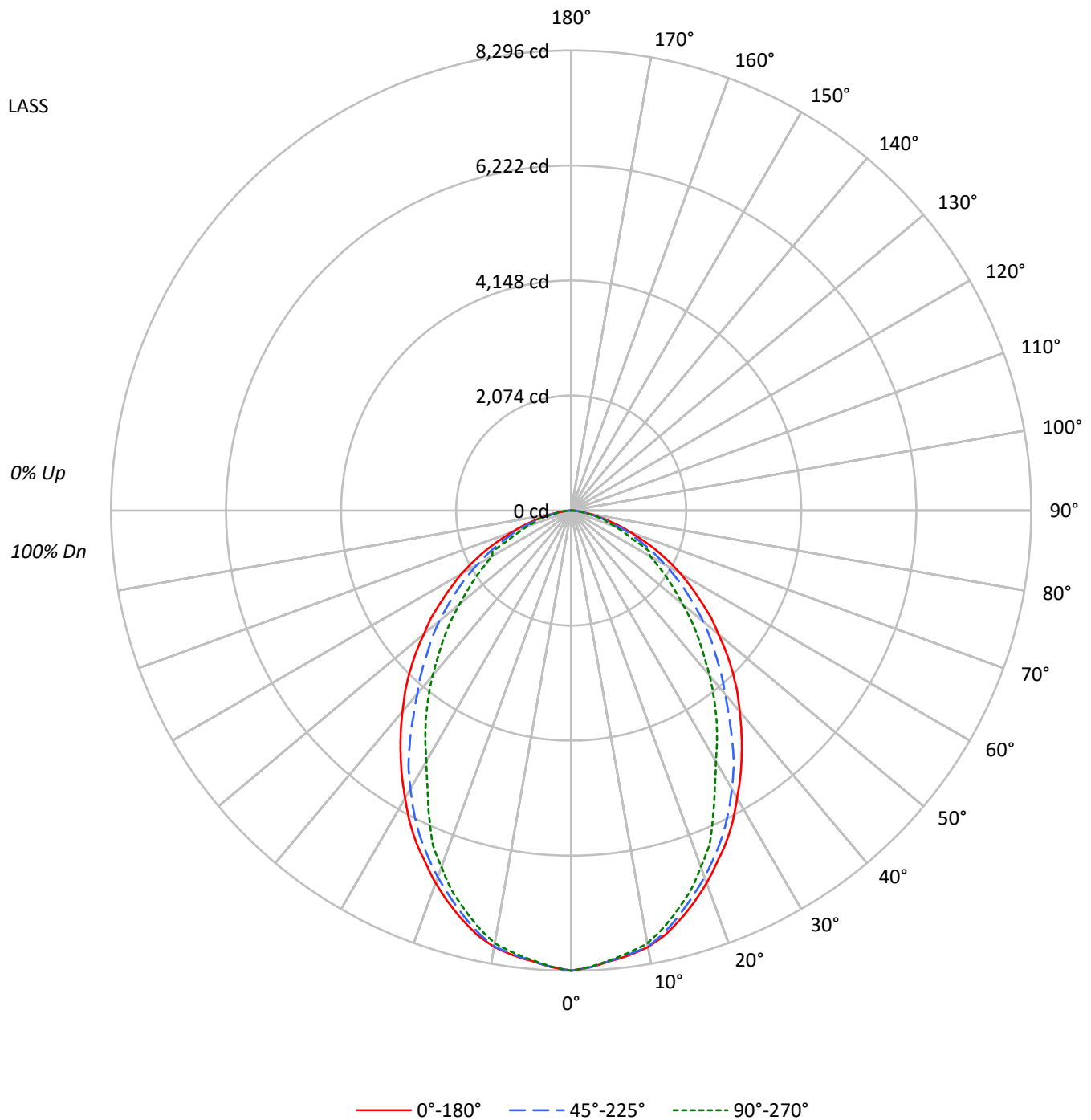
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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			
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°	11162	11162	11162
5°	11010	10997	10984
10°	10915	10902	10823
15°	10621	10514	10367
20°	10230	10066	9791
25°	9810	9596	8999
30°	9298	9000	8106
35°	8806	8317	7498
40°	8305	7580	6822
45°	7829	7008	6168
50°	7247	6504	5501
55°	6704	5894	4927
60°	6142	5265	4413
65°	5404	4611	3908
70°	4452	4037	3320
75°	3540	3091	3241
80°	2378	2229	2080
85°	1480	1777	2073

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7829 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	772.2	4.7
10°-20°	2119.3	13.0
20°-30°	2934.1	18.0
30°-40°	3128.6	19.2
40°-50°	2854.2	17.5
50°-60°	2236.0	13.7
60°-70°	1457.3	8.9
70°-80°	645.6	4.0
80°-90°	138.6	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°	5825.6	35.8
0°-40°	8954.2	55.0
0°-60°	14044.4	86.2
0°-90°	16286.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16286.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8296	8296	8296	8296	8296	
5°	8152	8142	8142	8133	8133	774
15°	7624	7624	7548	7471	7442	2143
25°	6608	6570	6464	6234	6061	3034
35°	5361	5323	5064	4680	4565	3352
45°	4114	4028	3683	3376	3242	3169
55°	2858	2772	2513	2215	2100	2563
65°	1698	1602	1448	1477	1228	1673
75°	681	633	595	566	623	730
85°	96	106	115	125	134	133
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8295.9	8295.9	8295.9	8295.9	8295.9
2.5°	8238.3	8238.3	8238.3	8228.7	8228.7
5°	8152.0	8142.4	8142.4	8132.8	8132.8
7.5°	8084.9	8075.3	8065.7	8056.1	8036.9
10°	7989.0	7989.0	7979.4	7931.4	7921.8
12.5°	7835.5	7825.9	7787.6	7720.4	7701.3
15°	7624.5	7624.5	7547.8	7471.1	7442.3
17.5°	7394.4	7384.8	7288.9	7212.1	7173.8
20°	7145.0	7125.8	7029.9	6905.2	6838.1
22.5°	6866.9	6866.9	6751.8	6588.7	6521.6
25°	6607.9	6569.6	6464.1	6233.9	6061.3
27.5°	6310.6	6253.1	6138.0	5811.9	5610.5
30°	5984.5	5955.8	5792.7	5370.7	5217.3
32.5°	5677.6	5629.7	5457.1	5015.9	4891.2
35°	5361.1	5322.8	5063.8	4680.2	4565.1
37.5°	5044.7	4996.7	4670.6	4363.7	4219.9
40°	4728.2	4670.6	4315.8	4037.6	3884.2
42.5°	4430.9	4354.1	4008.9	3711.6	3538.9
45°	4114.4	4028.1	3682.8	3375.9	3241.6
47.5°	3797.9	3721.2	3404.7	3088.2	2934.7
50°	3462.2	3395.1	3107.4	2790.9	2627.8
52.5°	3184.1	3078.6	2800.5	2484.0	2349.7
55°	2858.0	2771.7	2512.7	2215.4	2100.3
57.5°	2560.7	2474.4	2234.6	1956.5	1860.6
60°	2282.6	2157.9	1956.5	1716.7	1640.0
62.5°	1975.7	1879.8	1707.1	1505.7	1601.6
65°	1697.5	1601.6	1448.2	1477.0	1227.6
67.5°	1390.6	1342.7	1208.4	1074.1	1035.8
70°	1131.7	1074.1	1026.2	882.3	844.0
72.5°	901.5	844.0	776.8	700.1	671.3
75°	680.9	633.0	594.6	565.8	623.4
77.5°	469.9	450.8	422.0	393.2	383.6
80°	306.9	297.3	287.7	278.1	268.5
82.5°	182.2	182.2	182.2	182.2	182.2
85°	95.9	105.5	115.1	124.7	134.3
87.5°	57.5	57.5	67.1	76.7	86.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)