

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: P563071

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-80-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563071
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-35-UNV-80-97-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13723.0 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

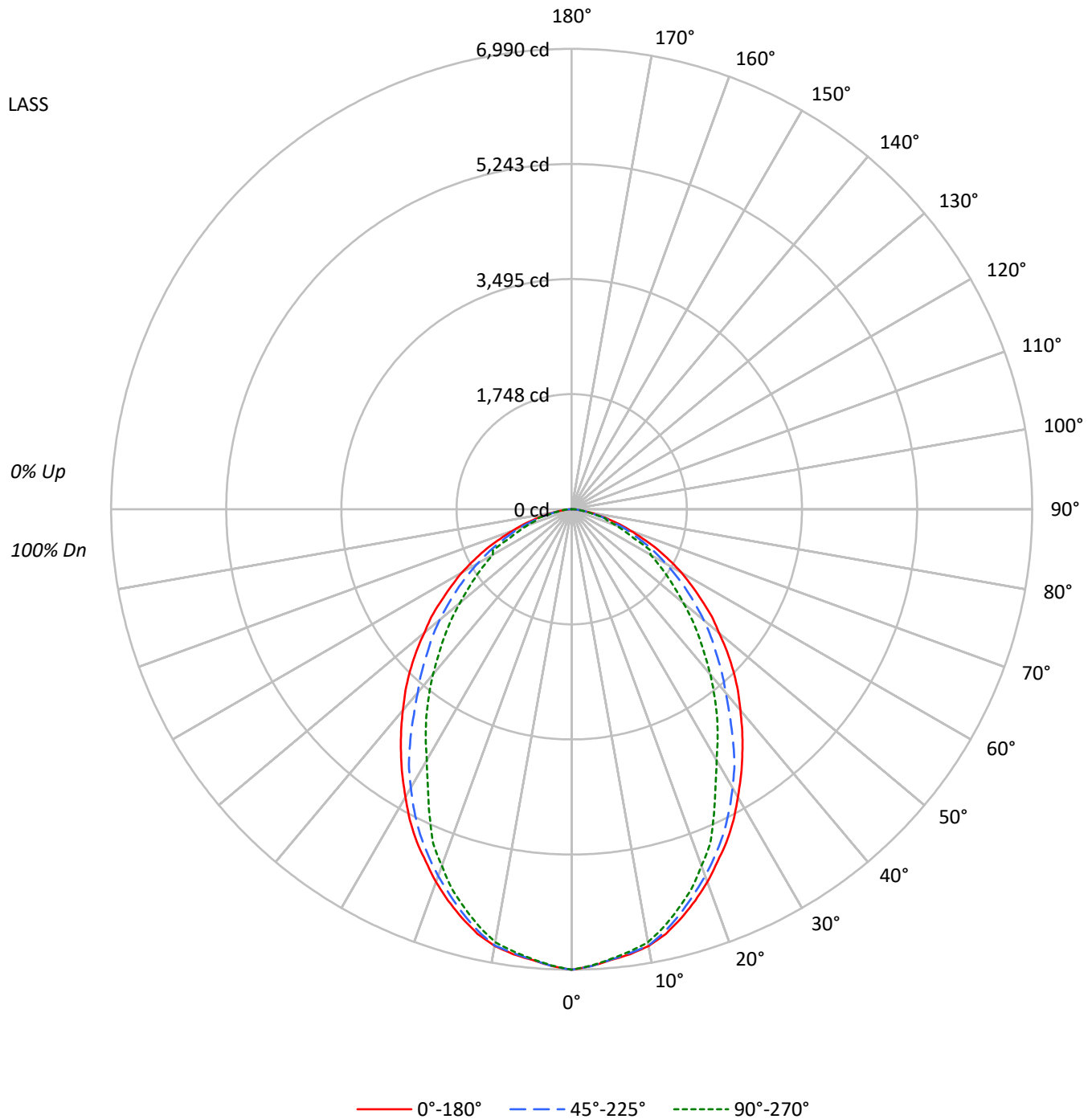
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9405	9405	9405
5°	9278	9267	9256
10°	9197	9186	9120
15°	8949	8859	8735
20°	8621	8482	8250
25°	8266	8086	7582
30°	7835	7583	6830
35°	7420	7009	6318
40°	6998	6387	5749
45°	6597	5905	5198
50°	6107	5481	4635
55°	5649	4967	4152
60°	5176	4436	3719
65°	4554	3885	3293
70°	3751	3402	2798
75°	2983	2604	2731
80°	2004	1878	1753
85°	1247	1497	1746

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6597 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	650.7	4.7
10°-20°	1785.8	13.0
20°-30°	2472.3	18.0
30°-40°	2636.2	19.2
40°-50°	2405.0	17.5
50°-60°	1884.1	13.7
60°-70°	1228.0	8.9
70°-80°	544.1	4.0
80°-90°	116.8	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°	4908.8	35.8
0°-40°	7545.0	55.0
0°-60°	11834.2	86.2
0°-90°	13723.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13723.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6990	6990	6990	6990	6990	
5°	6869	6861	6861	6853	6853	652
15°	6425	6425	6360	6295	6271	1806
25°	5568	5536	5447	5253	5107	2556
35°	4517	4485	4267	3944	3847	2824
45°	3467	3394	3103	2845	2732	2671
55°	2408	2336	2117	1867	1770	2160
65°	1430	1350	1220	1244	1034	1410
75°	574	533	501	477	525	615
85°	81	89	97	105	113	112
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6990.3	6990.3	6990.3	6990.3	6990.3
2.5°	6941.8	6941.8	6941.8	6933.7	6933.7
5°	6869.1	6861.0	6861.0	6852.9	6852.9
7.5°	6812.5	6804.4	6796.4	6788.3	6772.1
10°	6731.7	6731.7	6723.6	6683.2	6675.1
12.5°	6602.4	6594.3	6562.0	6505.4	6489.3
15°	6424.6	6424.6	6360.0	6295.3	6271.1
17.5°	6230.7	6222.6	6141.8	6077.1	6044.8
20°	6020.6	6004.4	5923.6	5818.5	5762.0
22.5°	5786.2	5786.2	5689.2	5551.8	5495.3
25°	5568.0	5535.7	5446.8	5252.8	5107.4
27.5°	5317.5	5269.0	5172.0	4897.3	4727.6
30°	5042.7	5018.5	4881.1	4525.5	4396.2
32.5°	4784.1	4743.7	4598.3	4226.5	4121.5
35°	4517.4	4485.1	4266.9	3943.7	3846.7
37.5°	4250.8	4210.4	3935.6	3677.0	3555.8
40°	3984.1	3935.6	3636.6	3402.2	3272.9
42.5°	3733.6	3668.9	3378.0	3127.5	2982.0
45°	3466.9	3394.1	3103.2	2844.6	2731.5
47.5°	3200.2	3135.5	2868.9	2602.2	2472.9
50°	2917.3	2860.8	2618.3	2351.7	2214.3
52.5°	2683.0	2594.1	2359.7	2093.1	1979.9
55°	2408.2	2335.5	2117.3	1866.8	1769.8
57.5°	2157.7	2085.0	1882.9	1648.6	1567.8
60°	1923.3	1818.3	1648.6	1446.6	1381.9
62.5°	1664.7	1583.9	1438.5	1268.8	1349.6
65°	1430.4	1349.6	1220.3	1244.5	1034.4
67.5°	1171.8	1131.4	1018.2	905.1	872.8
70°	953.6	905.1	864.7	743.5	711.2
72.5°	759.6	711.2	654.6	589.9	565.7
75°	573.8	533.4	501.0	476.8	525.3
77.5°	396.0	379.8	355.6	331.3	323.3
80°	258.6	250.5	242.4	234.4	226.3
82.5°	153.5	153.5	153.5	153.5	153.5
85°	80.8	88.9	97.0	105.1	113.1
87.5°	48.5	48.5	56.6	64.7	72.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)