

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: P563097

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-82-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563097
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-82-88-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11276.0 lumens
Efficiency: N/A
Efficacy: 87.0 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

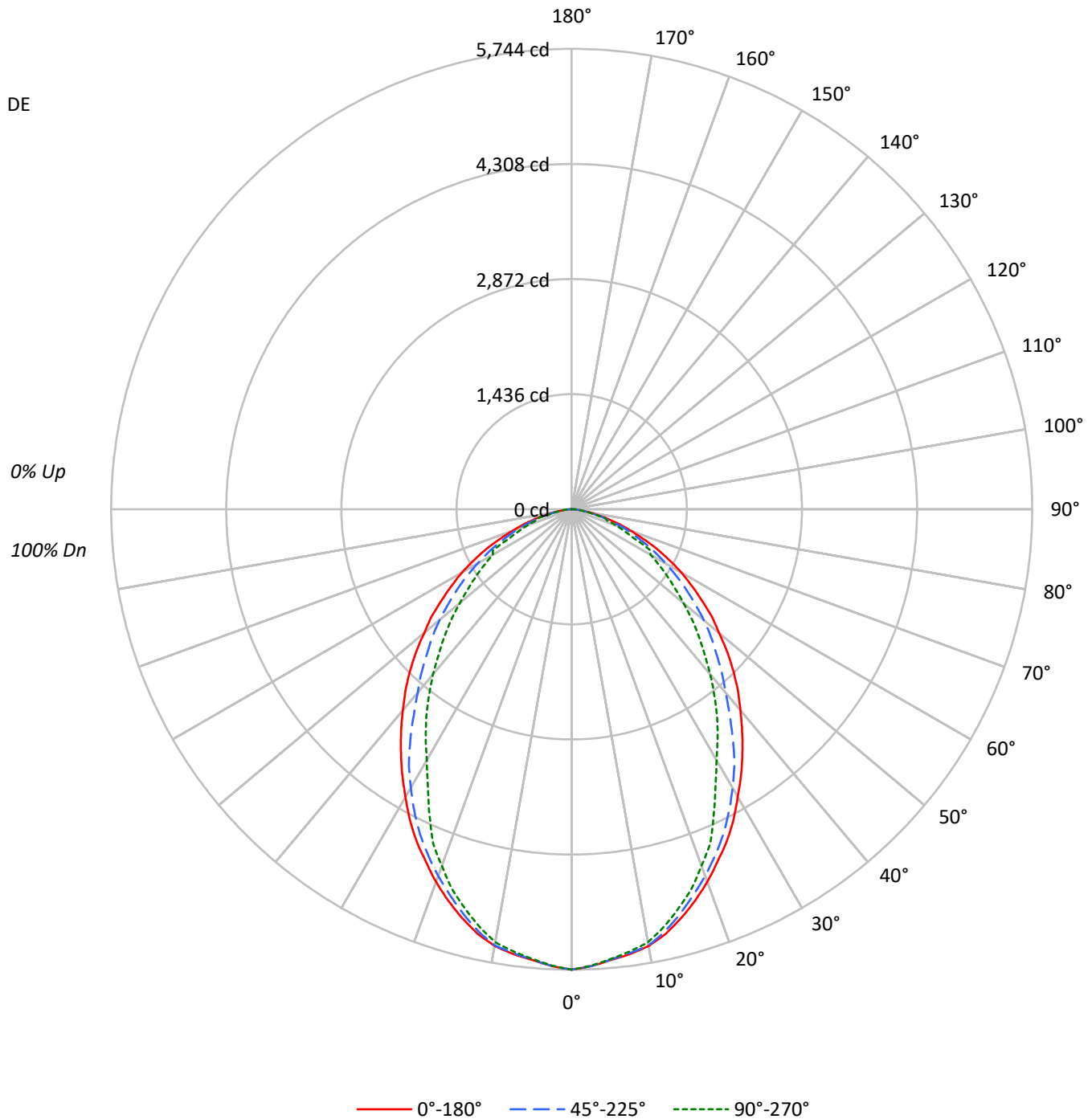
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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			
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°	7728	7728	7728
5°	7623	7614	7605
10°	7557	7548	7494
15°	7353	7279	7178
20°	7083	6969	6779
25°	6792	6644	6230
30°	6437	6231	5612
35°	6097	5759	5192
40°	5750	5248	4724
45°	5421	4852	4271
50°	5018	4504	3808
55°	4642	4081	3411
60°	4253	3645	3056
65°	3742	3192	2706
70°	3083	2795	2299
75°	2451	2140	2244
80°	1647	1543	1440
85°	1025	1230	1436

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5421 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	534.7	4.7
10°-20°	1467.4	13.0
20°-30°	2031.5	18.0
30°-40°	2166.1	19.2
40°-50°	1976.2	17.5
50°-60°	1548.2	13.7
60°-70°	1009.0	8.9
70°-80°	447.0	4.0
80°-90°	96.0	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°	4033.5	35.8
0°-40°	6199.7	55.0
0°-60°	9724.0	86.2
0°-90°	11276.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11276.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5744	5744	5744	5744	5744	
5°	5644	5638	5638	5631	5631	536
15°	5279	5279	5226	5173	5153	1484
25°	4575	4549	4476	4316	4197	2100
35°	3712	3685	3506	3240	3161	2321
45°	2849	2789	2550	2337	2244	2194
55°	1979	1919	1740	1534	1454	1775
65°	1175	1109	1003	1023	850	1158
75°	472	438	412	392	432	505
85°	66	73	80	86	93	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5743.8	5743.8	5743.8	5743.8	5743.8
2.5°	5704.0	5704.0	5704.0	5697.4	5697.4
5°	5644.2	5637.6	5637.6	5631.0	5631.0
7.5°	5597.8	5591.1	5584.5	5577.8	5564.6
10°	5531.4	5531.4	5524.7	5491.5	5484.9
12.5°	5425.1	5418.5	5391.9	5345.4	5332.1
15°	5279.0	5279.0	5225.9	5172.8	5152.9
17.5°	5119.7	5113.0	5046.6	4993.5	4966.9
20°	4947.0	4933.7	4867.3	4781.0	4734.5
22.5°	4754.4	4754.4	4674.8	4561.9	4515.4
25°	4575.2	4548.6	4475.5	4316.2	4196.7
27.5°	4369.3	4329.5	4249.8	4024.0	3884.6
30°	4143.5	4123.6	4010.7	3718.6	3612.3
32.5°	3931.0	3897.8	3778.3	3472.9	3386.5
35°	3711.9	3685.4	3506.1	3240.5	3160.8
37.5°	3492.8	3459.6	3233.8	3021.3	2921.7
40°	3273.7	3233.8	2988.1	2795.6	2689.3
42.5°	3067.8	3014.7	2775.6	2569.8	2450.3
45°	2848.7	2788.9	2549.9	2337.4	2244.4
47.5°	2629.6	2576.4	2357.3	2138.2	2031.9
50°	2397.1	2350.7	2151.5	1932.3	1819.4
52.5°	2204.6	2131.5	1939.0	1719.8	1626.9
55°	1978.8	1919.0	1739.8	1533.9	1454.2
57.5°	1773.0	1713.2	1547.2	1354.6	1288.2
60°	1580.4	1494.1	1354.6	1188.6	1135.5
62.5°	1367.9	1301.5	1182.0	1042.5	1108.9
65°	1175.3	1108.9	1002.7	1022.6	850.0
67.5°	962.8	929.6	836.7	743.7	717.2
70°	783.6	743.7	710.5	610.9	584.3
72.5°	624.2	584.3	537.9	484.7	464.8
75°	471.5	438.3	411.7	391.8	431.6
77.5°	325.4	312.1	292.2	272.3	265.6
80°	212.5	205.8	199.2	192.6	185.9
82.5°	126.2	126.2	126.2	126.2	126.2
85°	66.4	73.0	79.7	86.3	93.0
87.5°	39.8	39.8	46.5	53.1	59.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)