

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: P563073

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-81-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563073
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-81-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13642.0 lumens
Efficiency: N/A
Efficacy: 105.3 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

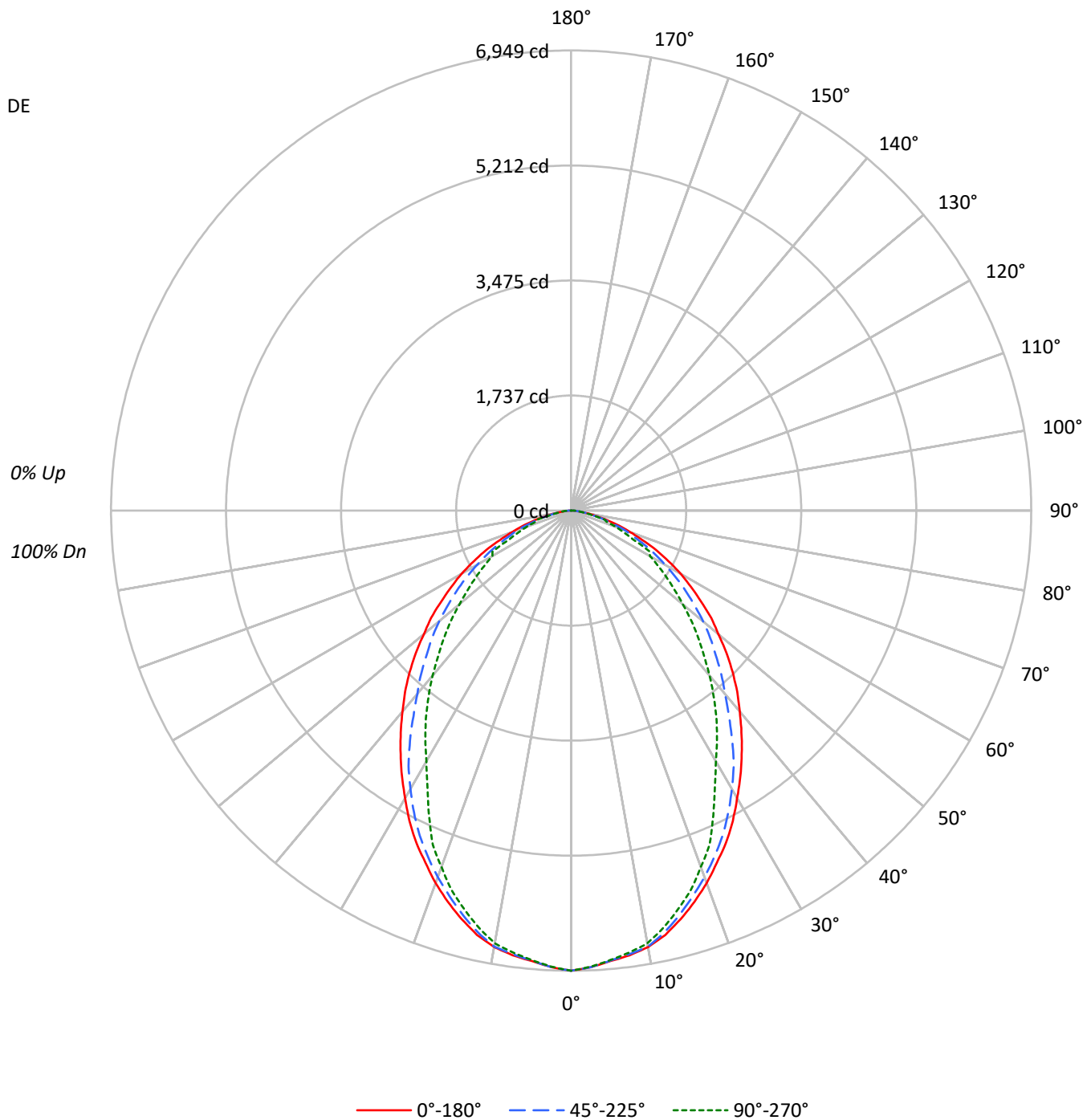
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9350	9350	9350
5°	9223	9212	9201
10°	9143	9132	9066
15°	8896	8807	8684
20°	8570	8432	8201
25°	8217	8038	7538
30°	7788	7539	6790
35°	7376	6967	6281
40°	6956	6350	5715
45°	6558	5870	5167
50°	6071	5448	4608
55°	5616	4937	4127
60°	5145	4410	3697
65°	4527	3862	3274
70°	3729	3382	2781
75°	2965	2589	2715
80°	1992	1867	1743
85°	1240	1488	1737

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6558 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	646.9	4.7
10°-20°	1775.3	13.0
20°-30°	2457.7	18.0
30°-40°	2620.7	19.2
40°-50°	2390.8	17.5
50°-60°	1873.0	13.7
60°-70°	1220.7	8.9
70°-80°	540.8	4.0
80°-90°	116.1	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°	4879.9	35.8
0°-40°	7500.5	55.0
0°-60°	11764.3	86.2
0°-90°	13642.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13642.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6949	6949	6949	6949	6949	
5°	6828	6820	6820	6812	6812	648
15°	6387	6387	6322	6258	6234	1795
25°	5535	5503	5415	5222	5077	2541
35°	4491	4459	4242	3920	3824	2808
45°	3446	3374	3085	2828	2715	2655
55°	2394	2322	2105	1856	1759	2147
65°	1422	1342	1213	1237	1028	1401
75°	570	530	498	474	522	611
85°	80	88	96	104	112	111
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6949.1	6949.1	6949.1	6949.1	6949.1
2.5°	6900.9	6900.9	6900.9	6892.8	6892.8
5°	6828.5	6820.5	6820.5	6812.5	6812.5
7.5°	6772.3	6764.3	6756.2	6748.2	6732.1
10°	6692.0	6692.0	6683.9	6643.8	6635.7
12.5°	6563.4	6555.4	6523.3	6467.0	6451.0
15°	6386.7	6386.7	6322.4	6258.2	6234.1
17.5°	6193.9	6185.9	6105.5	6041.3	6009.1
20°	5985.0	5969.0	5888.6	5784.2	5727.9
22.5°	5752.0	5752.0	5655.6	5519.1	5462.8
25°	5535.1	5503.0	5414.6	5221.8	5077.2
27.5°	5286.1	5237.9	5141.5	4868.4	4699.6
30°	5013.0	4988.9	4852.3	4498.8	4370.3
32.5°	4755.9	4715.7	4571.1	4201.6	4097.1
35°	4490.8	4458.6	4241.7	3920.4	3824.0
37.5°	4225.7	4185.5	3912.4	3655.3	3534.8
40°	3960.6	3912.4	3615.1	3382.1	3253.6
42.5°	3711.5	3647.2	3358.0	3109.0	2964.4
45°	3446.4	3374.1	3084.9	2827.8	2715.4
47.5°	3181.3	3117.0	2851.9	2586.8	2458.3
50°	2900.1	2843.9	2602.9	2337.8	2201.2
52.5°	2667.2	2578.8	2345.8	2080.7	1968.2
55°	2394.0	2321.7	2104.8	1855.8	1759.4
57.5°	2145.0	2072.7	1871.8	1638.9	1558.5
60°	1912.0	1807.6	1638.9	1438.0	1373.7
62.5°	1654.9	1574.6	1430.0	1261.3	1341.6
65°	1421.9	1341.6	1213.1	1237.2	1028.3
67.5°	1164.9	1124.7	1012.2	899.8	867.6
70°	948.0	899.8	859.6	739.1	707.0
72.5°	755.2	707.0	650.7	586.5	562.4
75°	570.4	530.2	498.1	474.0	522.2
77.5°	393.6	377.6	353.5	329.4	321.3
80°	257.1	249.0	241.0	233.0	224.9
82.5°	152.6	152.6	152.6	152.6	152.6
85°	80.3	88.4	96.4	104.4	112.5
87.5°	48.2	48.2	56.2	64.3	72.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)