

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: P563864

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-82-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563864
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-LD4-4LO-35-UNV-82-88-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7659.0 lumens
Efficiency: N/A
Efficacy: 81.8 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

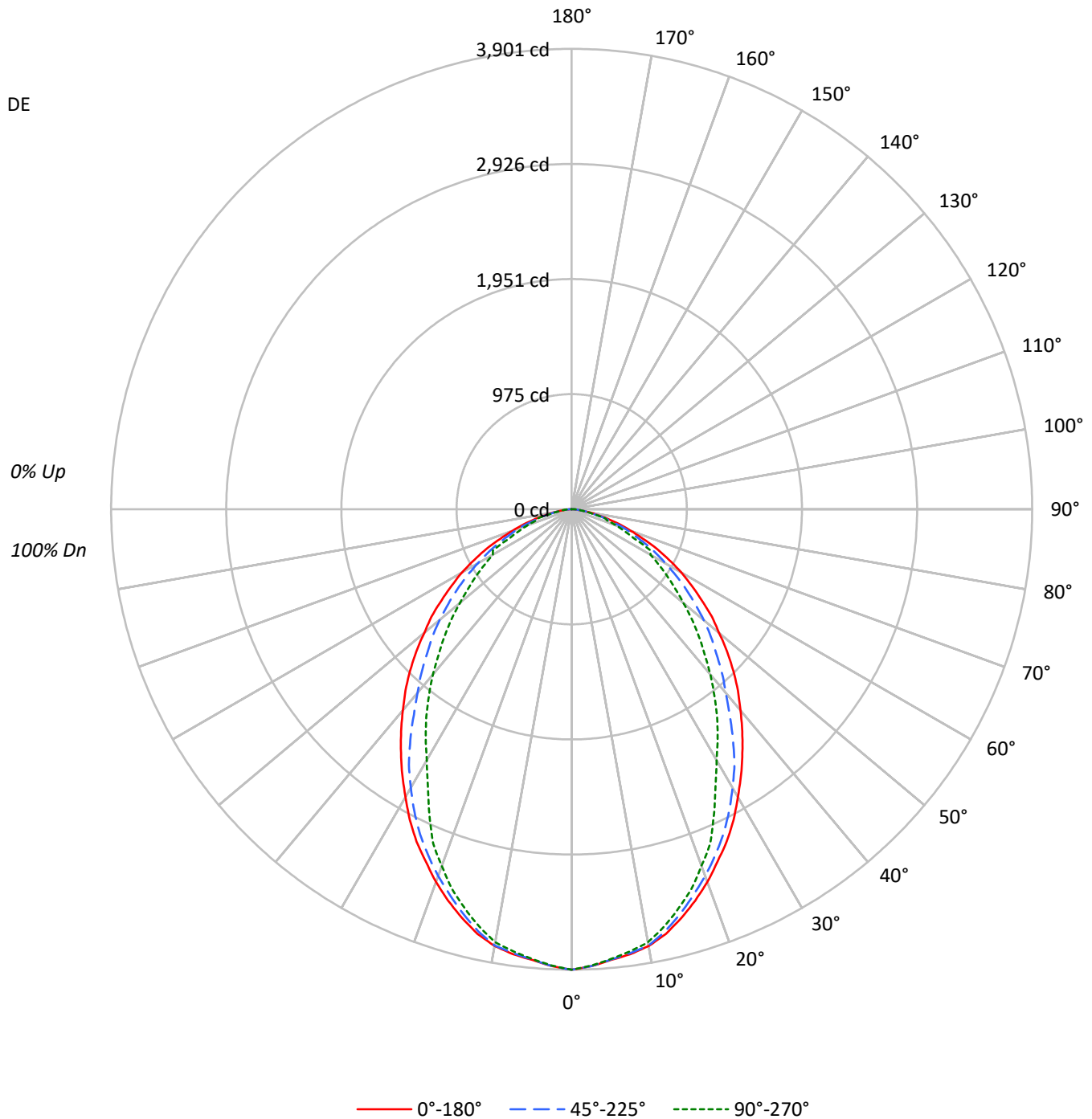
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5249	5249	5249
5°	5178	5172	5166
10°	5133	5127	5090
15°	4995	4944	4875
20°	4811	4734	4605
25°	4613	4513	4232
30°	4373	4232	3812
35°	4141	3912	3526
40°	3906	3565	3208
45°	3682	3295	2901
50°	3408	3059	2587
55°	3153	2772	2317
60°	2888	2476	2076
65°	2542	2168	1838
70°	2094	1899	1561
75°	1665	1454	1524
80°	1118	1048	979
85°	696	835	974

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3682 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	363.2	4.7
10°-20°	996.7	13.0
20°-30°	1379.8	18.0
30°-40°	1471.3	19.2
40°-50°	1342.3	17.5
50°-60°	1051.6	13.7
60°-70°	685.3	8.9
70°-80°	303.6	4.0
80°-90°	65.2	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°	2739.7	35.8
0°-40°	4211.0	55.0
0°-60°	6604.8	86.2
0°-90°	7659.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7659.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3901	3901	3901	3901	3901	
5°	3834	3829	3829	3825	3825	364
15°	3586	3586	3550	3514	3500	1008
25°	3108	3090	3040	2932	2850	1427
35°	2521	2503	2381	2201	2147	1576
45°	1935	1894	1732	1588	1524	1490
55°	1344	1304	1182	1042	988	1206
65°	798	753	681	695	577	787
75°	320	298	280	266	293	343
85°	45	50	54	59	63	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3901.4	3901.4	3901.4	3901.4	3901.4
2.5°	3874.3	3874.3	3874.3	3869.8	3869.8
5°	3833.7	3829.2	3829.2	3824.7	3824.7
7.5°	3802.2	3797.7	3793.1	3788.6	3779.6
10°	3757.1	3757.1	3752.6	3730.0	3725.5
12.5°	3684.9	3680.4	3662.3	3630.8	3621.8
15°	3585.7	3585.7	3549.6	3513.5	3500.0
17.5°	3477.4	3472.9	3427.8	3391.7	3373.7
20°	3360.2	3351.1	3306.0	3247.4	3215.8
22.5°	3229.4	3229.4	3175.2	3098.6	3067.0
25°	3107.6	3089.5	3039.9	2931.7	2850.5
27.5°	2967.8	2940.7	2886.6	2733.2	2638.5
30°	2814.4	2800.9	2724.2	2525.8	2453.6
32.5°	2670.1	2647.5	2566.3	2358.9	2300.2
35°	2521.2	2503.2	2381.4	2201.0	2146.9
37.5°	2372.4	2349.9	2196.5	2052.2	1984.5
40°	2223.6	2196.5	2029.6	1898.8	1826.7
42.5°	2083.7	2047.7	1885.3	1745.5	1664.3
45°	1934.9	1894.3	1731.9	1587.6	1524.5
47.5°	1786.1	1750.0	1601.1	1452.3	1380.1
50°	1628.2	1596.6	1461.3	1312.5	1235.8
52.5°	1497.4	1447.8	1317.0	1168.2	1105.0
55°	1344.1	1303.5	1181.7	1041.9	987.8
57.5°	1204.2	1163.7	1050.9	920.1	875.0
60°	1073.4	1014.8	920.1	807.3	771.3
62.5°	929.1	884.0	802.8	708.1	753.2
65°	798.3	753.2	681.1	694.6	577.3
67.5°	654.0	631.4	568.3	505.2	487.1
70°	532.2	505.2	482.6	414.9	396.9
72.5°	424.0	396.9	365.3	329.3	315.7
75°	320.2	297.7	279.6	266.1	293.2
77.5°	221.0	212.0	198.5	184.9	180.4
80°	144.3	139.8	135.3	130.8	126.3
82.5°	85.7	85.7	85.7	85.7	85.7
85°	45.1	49.6	54.1	58.6	63.1
87.5°	27.1	27.1	31.6	36.1	40.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)