

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: P562519

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-82-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562519
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-LD4-2HI-35-UNV-82-87-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8348.0 lumens
Efficiency: N/A
Efficacy: 96.6 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

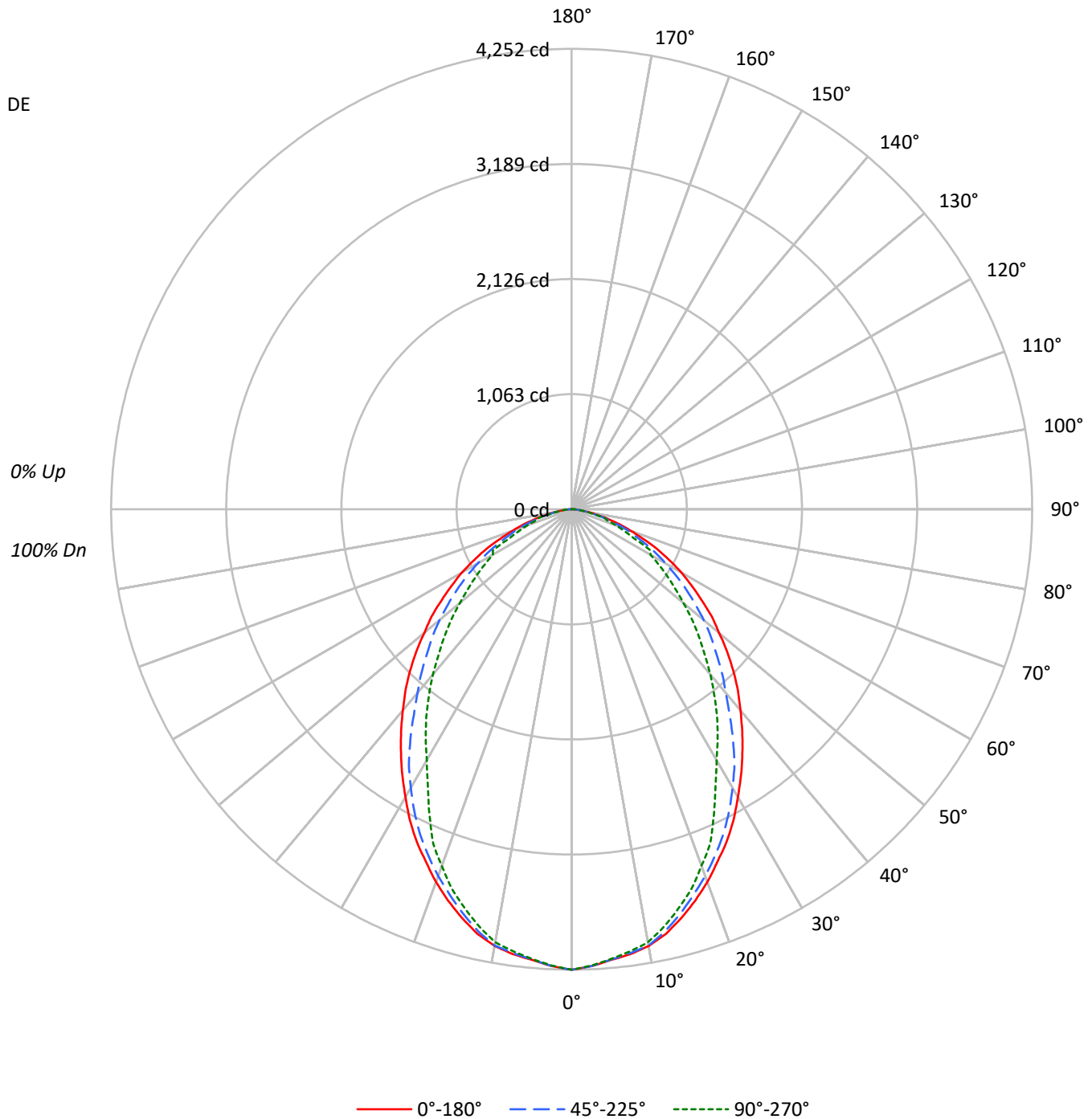
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5722	5722	5722
5°	5644	5637	5631
10°	5595	5588	5548
15°	5444	5389	5314
20°	5244	5159	5019
25°	5028	4919	4612
30°	4766	4613	4155
35°	4514	4264	3844
40°	4257	3886	3497
45°	4013	3592	3162
50°	3715	3334	2820
55°	3437	3021	2525
60°	3148	2699	2262
65°	2770	2363	2004
70°	2282	2069	1702
75°	1814	1585	1661
80°	1219	1143	1066
85°	760	911	1062

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4013 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	395.8	4.7
10°-20°	1086.3	13.0
20°-30°	1504.0	18.0
30°-40°	1603.7	19.2
40°-50°	1463.0	17.5
50°-60°	1146.1	13.7
60°-70°	747.0	8.9
70°-80°	331.0	4.0
80°-90°	71.1	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°	2986.1	35.8
0°-40°	4589.8	55.0
0°-60°	7199.0	86.2
0°-90°	8348.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8348.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4252	4252	4252	4252	4252	
5°	4179	4174	4174	4169	4169	397
15°	3908	3908	3869	3830	3815	1099
25°	3387	3368	3313	3195	3107	1555
35°	2748	2728	2596	2399	2340	1718
45°	2109	2065	1888	1730	1662	1625
55°	1465	1421	1288	1136	1077	1314
65°	870	821	742	757	629	858
75°	349	324	305	290	320	374
85°	49	54	59	64	69	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4252.4	4252.4	4252.4	4252.4	4252.4
2.5°	4222.9	4222.9	4222.9	4217.9	4217.9
5°	4178.6	4173.7	4173.7	4168.8	4168.8
7.5°	4144.2	4139.3	4134.4	4129.5	4119.6
10°	4095.0	4095.0	4090.1	4065.6	4060.6
12.5°	4016.4	4011.5	3991.8	3957.4	3947.6
15°	3908.2	3908.2	3868.9	3829.6	3814.8
17.5°	3790.3	3785.3	3736.2	3696.8	3677.2
20°	3662.4	3652.6	3603.4	3539.5	3505.1
22.5°	3519.9	3519.9	3460.9	3377.3	3342.9
25°	3387.1	3367.5	3313.4	3195.4	3106.9
27.5°	3234.7	3205.2	3146.3	2979.1	2875.9
30°	3067.6	3052.9	2969.3	2753.0	2674.3
32.5°	2910.3	2885.7	2797.2	2571.1	2507.2
35°	2748.1	2728.4	2595.7	2399.0	2340.0
37.5°	2585.8	2561.2	2394.1	2236.8	2163.1
40°	2423.6	2394.1	2212.2	2069.6	1991.0
42.5°	2271.2	2231.9	2054.9	1902.5	1814.0
45°	2109.0	2064.7	1887.8	1730.4	1661.6
47.5°	1946.7	1907.4	1745.2	1583.0	1504.3
50°	1774.7	1740.3	1592.8	1430.6	1347.0
52.5°	1632.1	1578.0	1435.5	1273.2	1204.4
55°	1465.0	1420.7	1288.0	1135.6	1076.6
57.5°	1312.6	1268.3	1145.4	1002.9	953.7
60°	1170.0	1106.1	1002.9	880.0	840.6
62.5°	1012.7	963.5	875.1	771.8	821.0
65°	870.1	821.0	742.3	757.1	629.3
67.5°	712.8	688.2	619.4	550.6	530.9
70°	580.1	550.6	526.0	452.3	432.6
72.5°	462.1	432.6	398.2	358.9	344.1
75°	349.0	324.5	304.8	290.0	319.5
77.5°	240.9	231.1	216.3	201.6	196.6
80°	157.3	152.4	147.5	142.6	137.6
82.5°	93.4	93.4	93.4	93.4	93.4
85°	49.2	54.1	59.0	63.9	68.8
87.5°	29.5	29.5	34.4	39.3	44.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)