

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: P564051

Luminaire Tested: FSR-24-4-LD4-4STD-35-UNV-82-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564051
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-LD4-4STD-35-UNV-82-85-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14229.0 lumens
Efficiency: N/A
Efficacy: 106.8 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

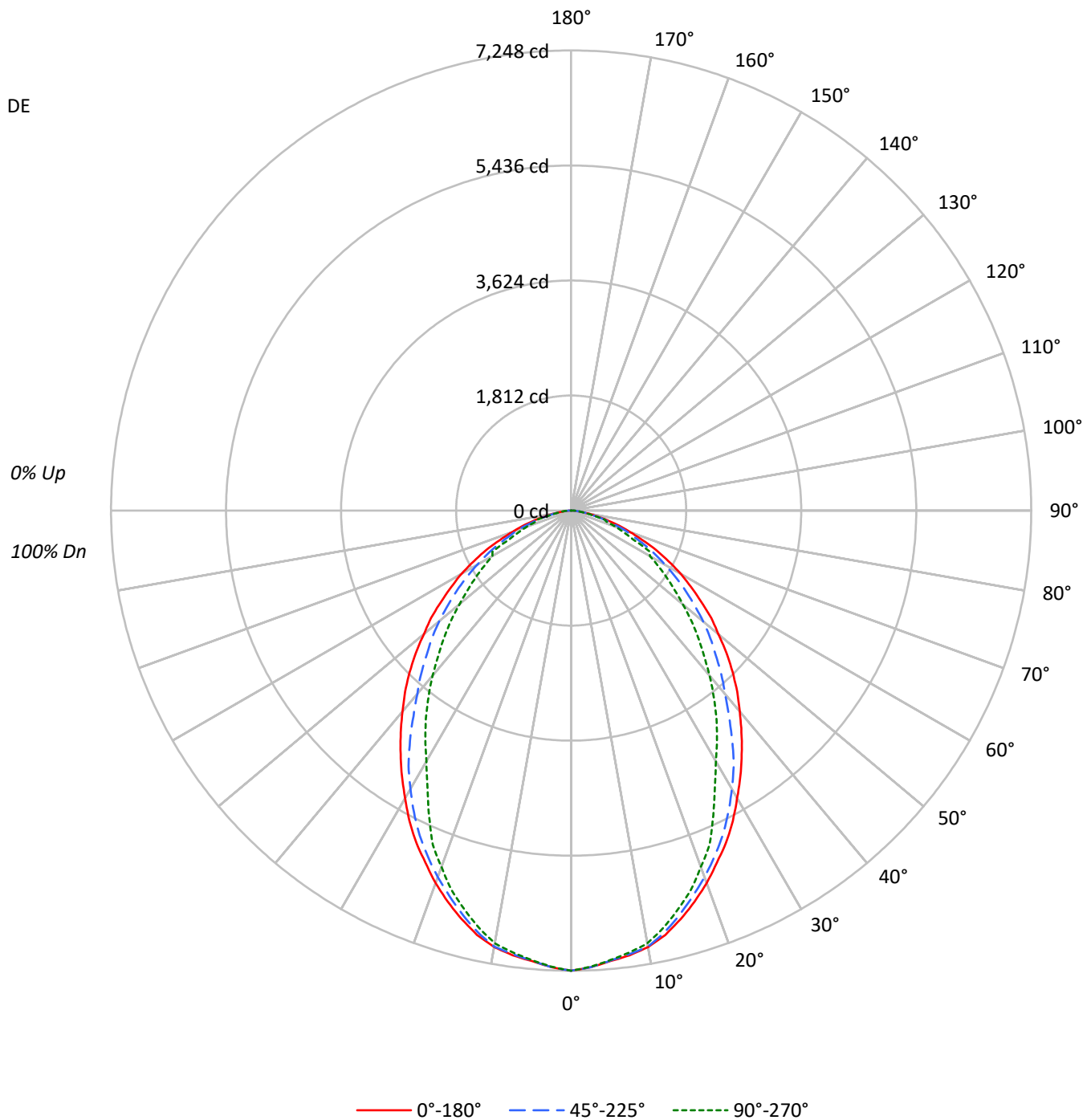
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	9752	9752	9752
5°	9620	9608	9597
10°	9536	9525	9456
15°	9279	9186	9057
20°	8938	8794	8554
25°	8571	8384	7862
30°	8124	7863	7082
35°	7694	7267	6551
40°	7256	6623	5961
45°	6840	6122	5389
50°	6332	5683	4806
55°	5857	5150	4305
60°	5367	4600	3856
65°	4722	4028	3415
70°	3890	3527	2901
75°	3093	2701	2832
80°	2077	1948	1818
85°	1294	1553	1811

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6840 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	674.7	4.7
10°-20°	1851.6	13.0
20°-30°	2563.5	18.0
30°-40°	2733.4	19.2
40°-50°	2493.7	17.5
50°-60°	1953.6	13.7
60°-70°	1273.3	8.9
70°-80°	564.1	4.0
80°-90°	121.1	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°	5089.8	35.8
0°-40°	7823.3	55.0
0°-60°	12270.5	86.2
0°-90°	14229.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14229.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7248	7248	7248	7248	7248	
5°	7122	7114	7114	7106	7106	676
15°	6662	6662	6594	6527	6502	1873
25°	5773	5740	5648	5446	5296	2651
35°	4684	4650	4424	4089	3988	2928
45°	3595	3519	3218	2950	2832	2769
55°	2497	2422	2195	1936	1835	2240
65°	1483	1399	1265	1290	1072	1462
75°	595	553	520	494	545	638
85°	84	92	101	109	117	116
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7248.1	7248.1	7248.1	7248.1	7248.1
2.5°	7197.8	7197.8	7197.8	7189.4	7189.4
5°	7122.4	7114.0	7114.0	7105.6	7105.6
7.5°	7063.7	7055.3	7047.0	7038.6	7021.8
10°	6979.9	6979.9	6971.5	6929.7	6921.3
12.5°	6845.9	6837.5	6804.0	6745.3	6728.5
15°	6661.5	6661.5	6594.5	6527.4	6502.3
17.5°	6460.4	6452.0	6368.2	6301.2	6267.7
20°	6242.6	6225.8	6142.0	6033.1	5974.4
22.5°	5999.6	5999.6	5899.0	5756.6	5697.9
25°	5773.3	5739.8	5647.6	5446.5	5295.7
27.5°	5513.6	5463.3	5362.7	5077.8	4901.9
30°	5228.7	5203.5	5061.1	4692.4	4558.3
32.5°	4960.5	4918.6	4767.8	4382.4	4273.4
35°	4684.0	4650.5	4424.3	4089.1	3988.5
37.5°	4407.5	4365.6	4080.7	3812.6	3686.9
40°	4131.0	4080.7	3770.7	3527.7	3393.6
42.5°	3871.2	3804.2	3502.5	3242.8	3091.9
45°	3594.7	3519.3	3217.6	2949.5	2832.2
47.5°	3318.2	3251.2	2974.6	2698.1	2564.1
50°	3024.9	2966.3	2714.9	2438.4	2295.9
52.5°	2781.9	2689.7	2446.7	2170.2	2052.9
55°	2497.0	2421.6	2195.4	1935.6	1835.1
57.5°	2237.3	2161.8	1952.4	1709.4	1625.6
60°	1994.3	1885.3	1709.4	1499.9	1432.9
62.5°	1726.1	1642.3	1491.5	1315.5	1399.3
65°	1483.1	1399.3	1265.3	1290.4	1072.5
67.5°	1215.0	1173.1	1055.8	938.5	905.0
70°	988.8	938.5	896.6	770.9	737.4
72.5°	787.7	737.4	678.7	611.7	586.5
75°	594.9	553.0	519.5	494.4	544.7
77.5°	410.6	393.8	368.7	343.5	335.2
80°	268.1	259.8	251.4	243.0	234.6
82.5°	159.2	159.2	159.2	159.2	159.2
85°	83.8	92.2	100.6	108.9	117.3
87.5°	50.3	50.3	58.7	67.0	75.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)