

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: P563925

Luminaire Tested: FSR-24-4-LD4-4LO-40-UNV-82-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563925
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-40-UNV-82-86-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10610.0 lumens
Efficiency: N/A
Efficacy: 113.4 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

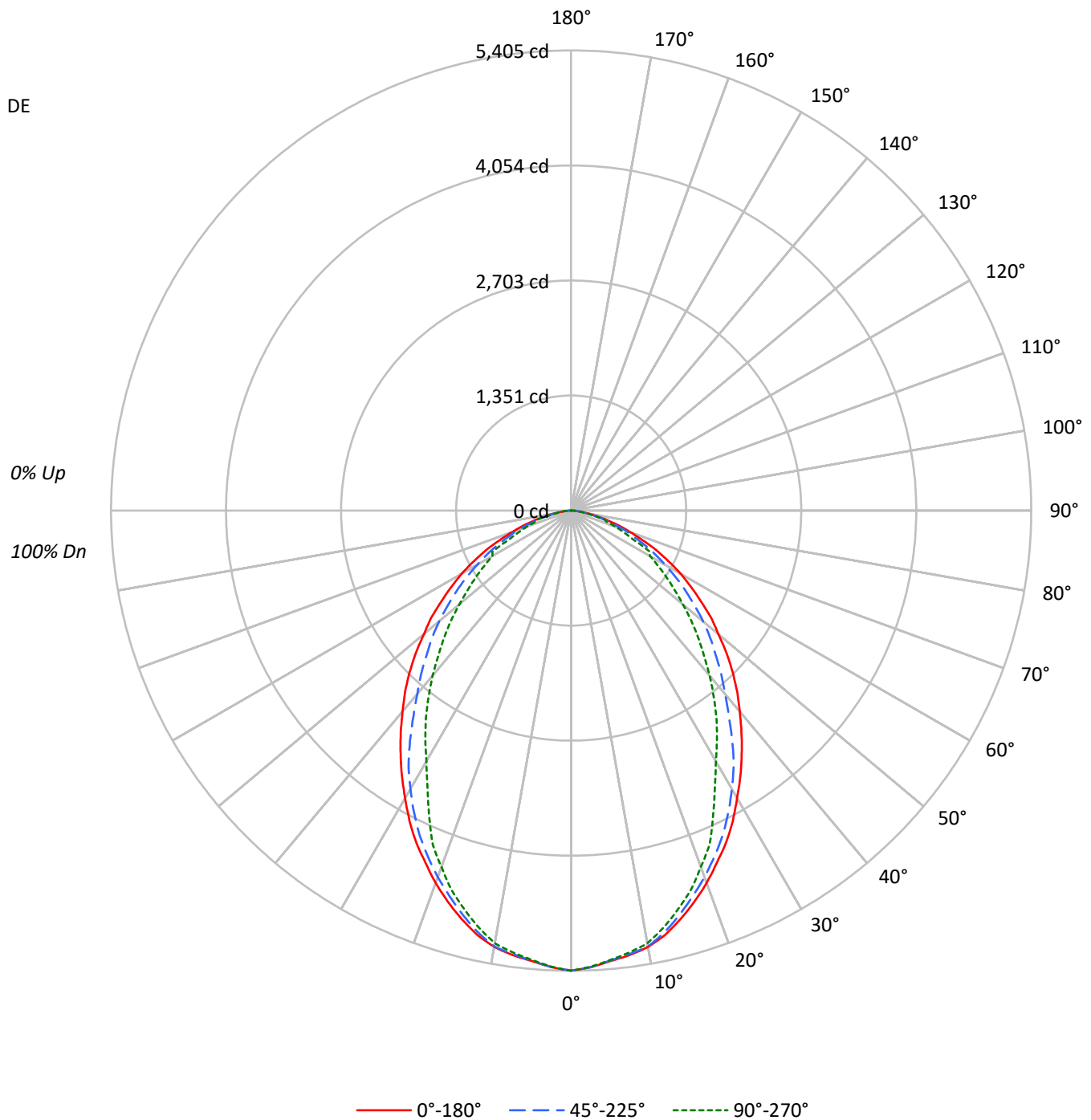
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7272	7272	7272
5°	7173	7165	7156
10°	7111	7102	7051
15°	6919	6849	6754
20°	6665	6558	6379
25°	6391	6252	5862
30°	6057	5863	5281
35°	5737	5419	4885
40°	5410	4938	4445
45°	5100	4565	4019
50°	4721	4237	3584
55°	4368	3840	3210
60°	4001	3430	2875
65°	3521	3004	2546
70°	2900	2630	2163
75°	2306	2014	2111
80°	1549	1452	1355
85°	965	1158	1351

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5100 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	503.1	4.7
10°-20°	1380.7	13.0
20°-30°	1911.5	18.0
30°-40°	2038.2	19.2
40°-50°	1859.4	17.5
50°-60°	1456.7	13.7
60°-70°	949.4	8.9
70°-80°	420.6	4.0
80°-90°	90.3	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°	3795.3	35.8
0°-40°	5833.5	55.0
0°-60°	9149.6	86.2
0°-90°	10610.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10610.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5405	5405	5405	5405	5405	
5°	5311	5305	5305	5298	5298	504
15°	4967	4967	4917	4867	4848	1396
25°	4305	4280	4211	4061	3949	1976
35°	3493	3468	3299	3049	2974	2184
45°	2680	2624	2399	2199	2112	2065
55°	1862	1806	1637	1443	1368	1670
65°	1106	1043	944	962	800	1090
75°	444	412	387	369	406	475
85°	62	69	75	81	88	87
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5404.6	5404.6	5404.6	5404.6	5404.6
2.5°	5367.1	5367.1	5367.1	5360.9	5360.9
5°	5310.9	5304.6	5304.6	5298.4	5298.4
7.5°	5267.1	5260.9	5254.6	5248.4	5235.9
10°	5204.7	5204.7	5198.4	5167.2	5160.9
12.5°	5104.7	5098.4	5073.4	5029.7	5017.2
15°	4967.2	4967.2	4917.2	4867.3	4848.5
17.5°	4817.3	4811.0	4748.5	4698.6	4673.6
20°	4654.8	4642.3	4579.8	4498.6	4454.9
22.5°	4473.6	4473.6	4398.7	4292.4	4248.7
25°	4304.9	4279.9	4211.2	4061.3	3948.8
27.5°	4111.2	4073.8	3998.8	3786.3	3655.1
30°	3898.8	3880.1	3773.8	3498.9	3399.0
32.5°	3698.9	3667.6	3555.2	3267.7	3186.5
35°	3492.7	3467.7	3299.0	3049.1	2974.1
37.5°	3286.5	3255.3	3042.8	2842.9	2749.2
40°	3080.3	3042.8	2811.6	2630.4	2530.5
42.5°	2886.6	2836.6	2611.7	2418.0	2305.5
45°	2680.4	2624.2	2399.3	2199.3	2111.9
47.5°	2474.2	2424.3	2218.1	2011.9	1911.9
50°	2255.6	2211.8	2024.4	1818.2	1712.0
52.5°	2074.4	2005.6	1824.4	1618.3	1530.8
55°	1861.9	1805.7	1637.0	1443.3	1368.3
57.5°	1668.2	1612.0	1455.8	1274.6	1212.1
60°	1487.0	1405.8	1274.6	1118.4	1068.4
62.5°	1287.1	1224.6	1112.2	980.9	1043.4
65°	1105.9	1043.4	943.5	962.2	799.8
67.5°	906.0	874.7	787.3	699.8	674.8
70°	737.3	699.8	668.5	574.8	549.8
72.5°	587.3	549.8	506.1	456.1	437.4
75°	443.6	412.4	387.4	368.6	406.1
77.5°	306.2	293.7	274.9	256.2	249.9
80°	199.9	193.7	187.4	181.2	174.9
82.5°	118.7	118.7	118.7	118.7	118.7
85°	62.5	68.7	75.0	81.2	87.5
87.5°	37.5	37.5	43.7	50.0	56.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)