

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: P563474

Luminaire Tested: FSR-24-4-LD4-3STD-35-UNV-82-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563474
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-LD4-3STD-35-UNV-82-85-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8929.0 lumens
Efficiency: N/A
Efficacy: 89.4 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

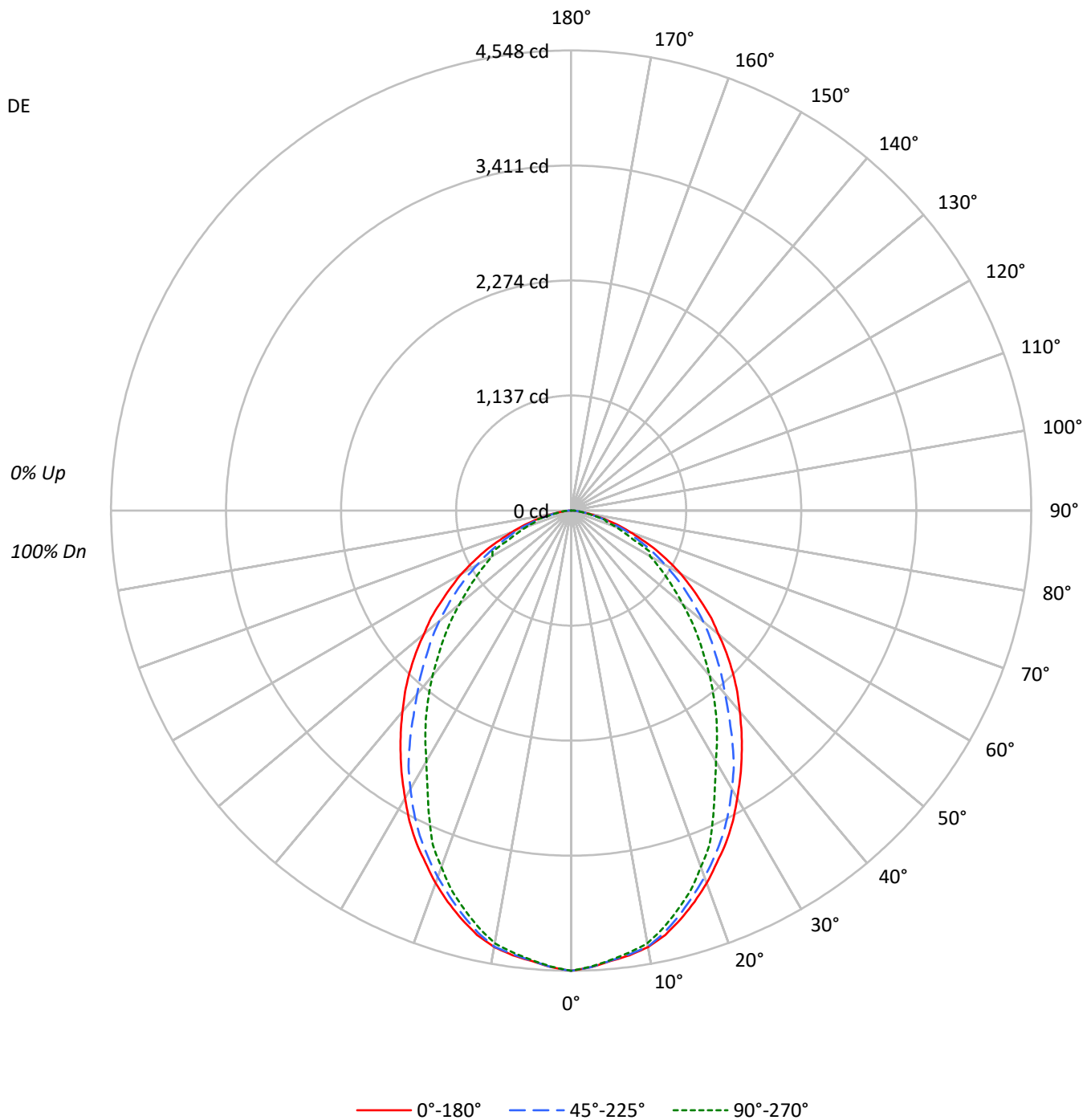
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6120	6120	6120
5°	6037	6029	6022
10°	5984	5977	5934
15°	5823	5764	5684
20°	5609	5519	5368
25°	5378	5261	4934
30°	5098	4934	4444
35°	4828	4560	4111
40°	4553	4156	3740
45°	4292	3842	3382
50°	3973	3566	3016
55°	3676	3232	2701
60°	3367	2887	2419
65°	2963	2528	2143
70°	2441	2213	1820
75°	1941	1695	1777
80°	1304	1222	1141
85°	812	974	1136

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4292 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	423.4	4.7
10°-20°	1161.9	13.0
20°-30°	1608.6	18.0
30°-40°	1715.3	19.2
40°-50°	1564.8	17.5
50°-60°	1225.9	13.7
60°-70°	799.0	8.9
70°-80°	354.0	4.0
80°-90°	76.0	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°	3194.0	35.8
0°-40°	4909.2	55.0
0°-60°	7700.0	86.2
0°-90°	8929.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8929.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4548	4548	4548	4548	4548	
5°	4469	4464	4464	4459	4459	424
15°	4180	4180	4138	4096	4080	1175
25°	3623	3602	3544	3418	3323	1663
35°	2939	2918	2776	2566	2503	1838
45°	2256	2208	2019	1851	1777	1738
55°	1567	1520	1378	1215	1152	1405
65°	931	878	794	810	673	917
75°	373	347	326	310	342	400
85°	53	58	63	68	74	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4548.3	4548.3	4548.3	4548.3	4548.3
2.5°	4516.8	4516.8	4516.8	4511.5	4511.5
5°	4469.4	4464.2	4464.2	4458.9	4458.9
7.5°	4432.6	4427.4	4422.1	4416.9	4406.3
10°	4380.1	4380.1	4374.8	4348.5	4343.2
12.5°	4295.9	4290.7	4269.6	4232.8	4222.3
15°	4180.2	4180.2	4138.2	4096.1	4080.3
17.5°	4054.0	4048.8	3996.2	3954.1	3933.1
20°	3917.3	3906.8	3854.2	3785.9	3749.1
22.5°	3764.8	3764.8	3701.7	3612.4	3575.6
25°	3622.9	3601.8	3544.0	3417.8	3323.2
27.5°	3459.9	3428.3	3365.2	3186.4	3076.0
30°	3281.1	3265.3	3175.9	2944.6	2860.4
32.5°	3112.8	3086.5	2991.9	2750.0	2681.7
35°	2939.3	2918.3	2776.3	2566.0	2502.9
37.5°	2765.8	2739.5	2560.7	2392.5	2313.6
40°	2592.3	2560.7	2366.2	2213.7	2129.6
42.5°	2429.3	2387.2	2197.9	2034.9	1940.3
45°	2255.8	2208.4	2019.1	1850.9	1777.3
47.5°	2082.2	2040.2	1866.6	1693.1	1609.0
50°	1898.2	1861.4	1703.6	1530.1	1440.7
52.5°	1745.7	1687.9	1535.4	1361.9	1288.3
55°	1566.9	1519.6	1377.6	1214.6	1151.5
57.5°	1403.9	1356.6	1225.2	1072.7	1020.1
60°	1251.4	1183.1	1072.7	941.2	899.1
62.5°	1083.2	1030.6	936.0	825.5	878.1
65°	930.7	878.1	794.0	809.8	673.0
67.5°	762.4	736.1	662.5	588.9	567.9
70°	620.5	588.9	562.6	483.8	462.7
72.5°	494.3	462.7	425.9	383.8	368.1
75°	373.3	347.0	326.0	310.2	341.8
77.5°	257.7	247.1	231.4	215.6	210.3
80°	168.3	163.0	157.7	152.5	147.2
82.5°	99.9	99.9	99.9	99.9	99.9
85°	52.6	57.8	63.1	68.4	73.6
87.5°	31.5	31.5	36.8	42.1	47.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)