

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: P563859

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563859
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-82-85-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: 10625.0 lumens
Efficiency: N/A
Efficacy: 113.5 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

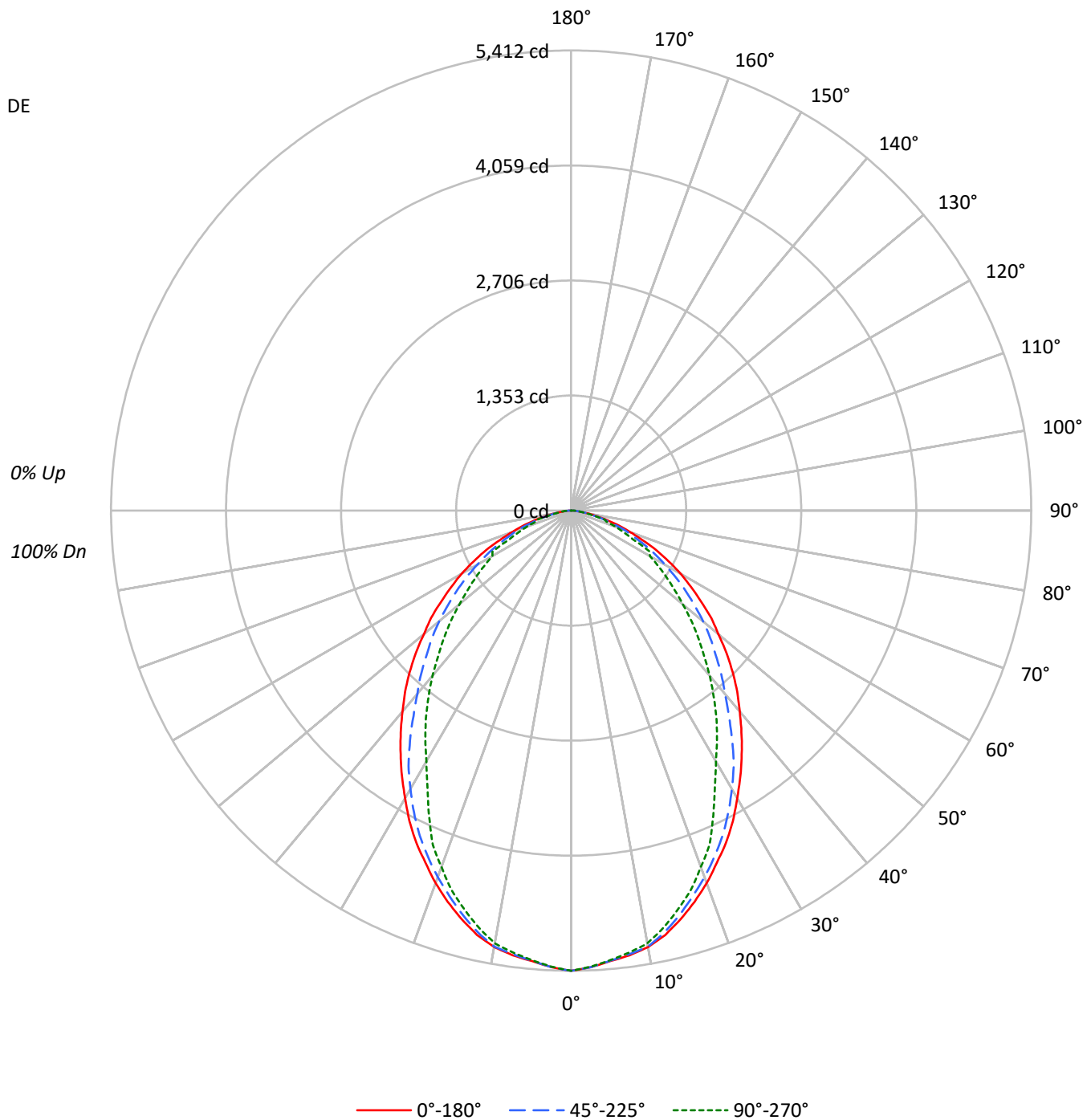
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	7282	7282	7282
5°	7183	7175	7166
10°	7121	7112	7061
15°	6929	6859	6763
20°	6674	6567	6388
25°	6400	6261	5871
30°	6066	5872	5288
35°	5745	5426	4892
40°	5418	4945	4451
45°	5108	4572	4024
50°	4728	4243	3589
55°	4374	3845	3214
60°	4007	3435	2879
65°	3526	3008	2550
70°	2904	2634	2166
75°	2309	2017	2114
80°	1551	1454	1358
85°	966	1159	1352

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5108 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	503.8	4.7
10°-20°	1382.7	13.0
20°-30°	1914.2	18.0
30°-40°	2041.1	19.2
40°-50°	1862.1	17.5
50°-60°	1458.8	13.7
60°-70°	950.8	8.9
70°-80°	421.2	4.0
80°-90°	90.4	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°	3800.7	35.8
0°-40°	5841.7	55.0
0°-60°	9162.6	86.2
0°-90°	10625.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10625.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5412	5412	5412	5412	5412	
5°	5318	5312	5312	5306	5306	505
15°	4974	4974	4924	4874	4855	1398
25°	4311	4286	4217	4067	3954	1979
35°	3498	3473	3304	3053	2978	2187
45°	2684	2628	2403	2202	2115	2068
55°	1865	1808	1639	1445	1370	1672
65°	1108	1045	945	964	801	1091
75°	444	413	388	369	407	476
85°	63	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°	5412.2	5412.2	5412.2	5412.2	5412.2
2.5°	5374.7	5374.7	5374.7	5368.4	5368.4
5°	5318.4	5312.1	5312.1	5305.9	5305.9
7.5°	5274.6	5268.3	5262.1	5255.8	5243.3
10°	5212.0	5212.0	5205.8	5174.5	5168.2
12.5°	5111.9	5105.6	5080.6	5036.8	5024.3
15°	4974.2	4974.2	4924.2	4874.1	4855.4
17.5°	4824.1	4817.8	4755.3	4705.2	4680.2
20°	4661.4	4648.9	4586.3	4505.0	4461.2
22.5°	4480.0	4480.0	4404.9	4298.5	4254.7
25°	4311.0	4286.0	4217.2	4067.0	3954.4
27.5°	4117.1	4079.5	4004.4	3791.7	3660.3
30°	3904.3	3885.5	3779.2	3503.9	3403.8
32.5°	3704.1	3672.8	3560.2	3272.4	3191.0
35°	3497.6	3472.6	3303.7	3053.4	2978.3
37.5°	3291.1	3259.9	3047.1	2846.9	2753.0
40°	3084.7	3047.1	2815.6	2634.2	2534.1
42.5°	2890.7	2840.6	2615.4	2421.4	2308.8
45°	2684.2	2627.9	2402.7	2202.4	2114.8
47.5°	2477.7	2427.7	2221.2	2014.7	1914.6
50°	2258.7	2214.9	2027.2	1820.8	1714.4
52.5°	2077.3	2008.5	1827.0	1620.5	1532.9
55°	1864.6	1808.2	1639.3	1445.3	1370.3
57.5°	1670.6	1614.3	1457.9	1276.4	1213.8
60°	1489.1	1407.8	1276.4	1120.0	1069.9
62.5°	1288.9	1226.4	1113.7	982.3	1044.9
65°	1107.5	1044.9	944.8	963.6	800.9
67.5°	907.3	876.0	788.4	700.8	675.7
70°	738.3	700.8	669.5	575.6	550.6
72.5°	588.2	550.6	506.8	456.8	438.0
75°	444.2	413.0	387.9	369.2	406.7
77.5°	306.6	294.1	275.3	256.5	250.3
80°	200.2	194.0	187.7	181.5	175.2
82.5°	118.9	118.9	118.9	118.9	118.9
85°	62.6	68.8	75.1	81.3	87.6
87.5°	37.5	37.5	43.8	50.1	56.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)