

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: P563603

Luminaire Tested: FSR-24-4-LD4-3STD-50-UNV-82-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563603
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-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10961.0 lumens
Efficiency: N/A
Efficacy: 109.7 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

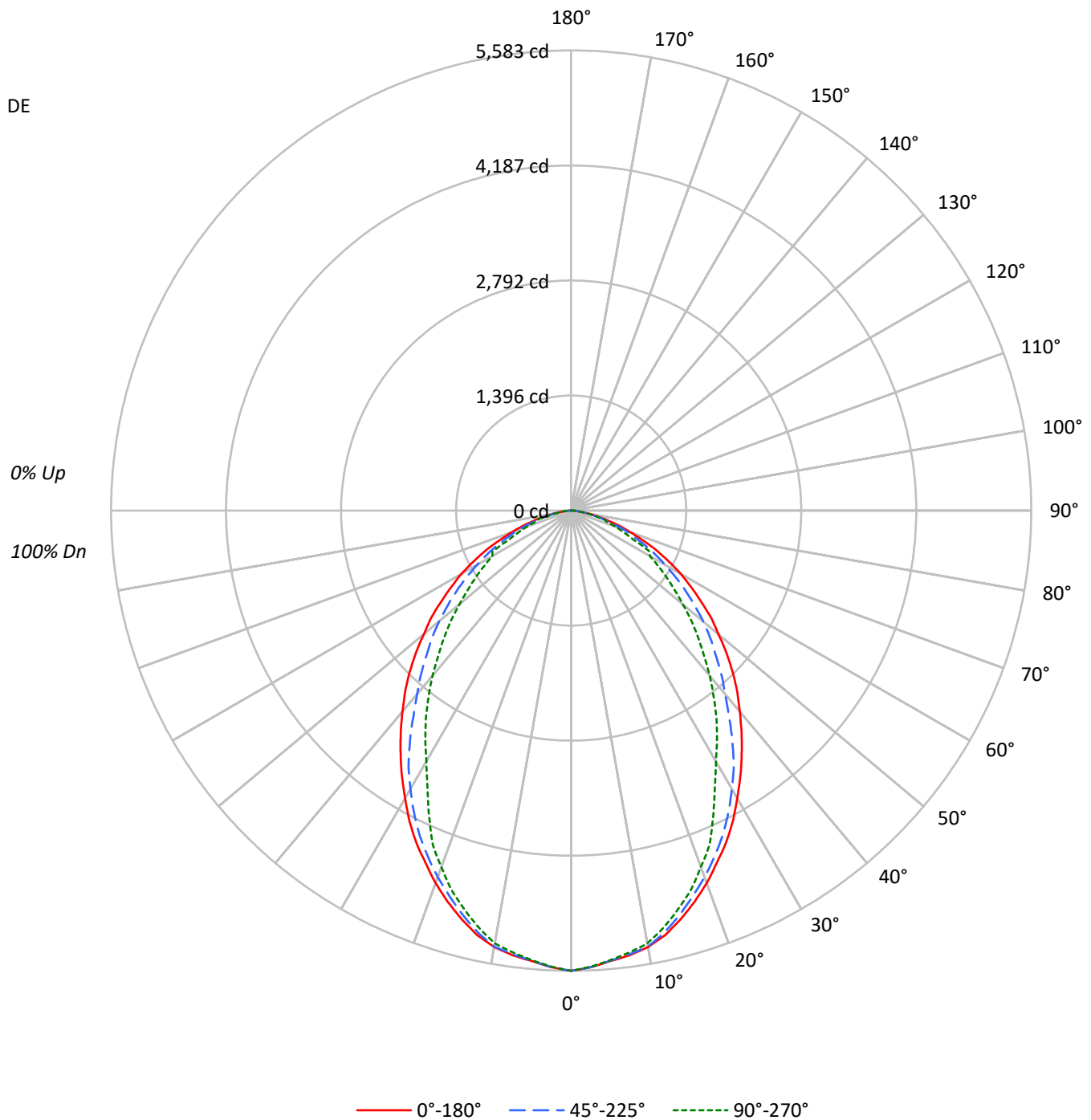
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7512	7512	7512
5°	7410	7402	7393
10°	7346	7337	7284
15°	7148	7076	6977
20°	6885	6775	6590
25°	6602	6459	6056
30°	6258	6057	5455
35°	5927	5598	5047
40°	5589	5102	4592
45°	5269	4716	4151
50°	4878	4378	3702
55°	4512	3967	3316
60°	4134	3543	2970
65°	3637	3103	2630
70°	2996	2717	2234
75°	2383	2080	2181
80°	1601	1500	1400
85°	996	1196	1396

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5269 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	519.7	4.7
10°-20°	1426.4	13.0
20°-30°	1974.7	18.0
30°-40°	2105.6	19.2
40°-50°	1920.9	17.5
50°-60°	1504.9	13.7
60°-70°	980.8	8.9
70°-80°	434.5	4.0
80°-90°	93.3	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°	3920.8	35.8
0°-40°	6026.5	55.0
0°-60°	9452.3	86.2
0°-90°	10961.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10961.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5583	5583	5583	5583	5583	
5°	5487	5480	5480	5474	5474	521
15°	5132	5132	5080	5028	5009	1443
25°	4447	4422	4350	4196	4079	2042
35°	3608	3582	3408	3150	3072	2256
45°	2769	2711	2479	2272	2182	2133
55°	1924	1865	1691	1491	1414	1725
65°	1142	1078	975	994	826	1126
75°	458	426	400	381	420	491
85°	64	71	78	84	90	90
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5583.4	5583.4	5583.4	5583.4	5583.4
2.5°	5544.7	5544.7	5544.7	5538.2	5538.2
5°	5486.6	5480.1	5480.1	5473.7	5473.7
7.5°	5441.4	5434.9	5428.5	5422.0	5409.1
10°	5376.8	5376.8	5370.4	5338.1	5331.7
12.5°	5273.6	5267.1	5241.3	5196.1	5183.2
15°	5131.6	5131.6	5079.9	5028.3	5008.9
17.5°	4976.6	4970.2	4905.6	4854.0	4828.2
20°	4808.8	4795.9	4731.4	4647.4	4602.3
22.5°	4621.6	4621.6	4544.2	4434.4	4389.3
25°	4447.3	4421.5	4350.5	4195.6	4079.4
27.5°	4247.2	4208.5	4131.1	3911.6	3776.0
30°	4027.8	4008.4	3898.7	3614.7	3511.4
32.5°	3821.2	3789.0	3672.8	3375.9	3291.9
35°	3608.2	3582.4	3408.1	3149.9	3072.5
37.5°	3395.2	3362.9	3143.5	2936.9	2840.1
40°	3182.2	3143.5	2904.7	2717.5	2614.2
42.5°	2982.1	2930.5	2698.1	2498.0	2381.8
45°	2769.1	2711.0	2478.6	2272.1	2181.7
47.5°	2556.1	2504.5	2291.4	2078.4	1975.2
50°	2330.2	2285.0	2091.3	1878.3	1768.6
52.5°	2143.0	2072.0	1884.8	1671.8	1581.4
55°	1923.5	1865.4	1691.2	1491.1	1413.6
57.5°	1723.4	1665.3	1504.0	1316.8	1252.2
60°	1536.2	1452.3	1316.8	1155.4	1103.8
62.5°	1329.7	1265.1	1149.0	1013.4	1077.9
65°	1142.5	1077.9	974.7	994.0	826.2
67.5°	935.9	903.7	813.3	722.9	697.1
70°	761.7	722.9	690.7	593.8	568.0
72.5°	606.7	568.0	522.8	471.2	451.8
75°	458.3	426.0	400.2	380.8	419.6
77.5°	316.3	303.4	284.0	264.6	258.2
80°	206.6	200.1	193.6	187.2	180.7
82.5°	122.6	122.6	122.6	122.6	122.6
85°	64.5	71.0	77.5	83.9	90.4
87.5°	38.7	38.7	45.2	51.6	58.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)