

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: P563907

Luminaire Tested: FSR-24-4-LD4-4LO-40-UNV-81-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563907
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-81-85-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10962.0 lumens
Efficiency: N/A
Efficacy: 117.1 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

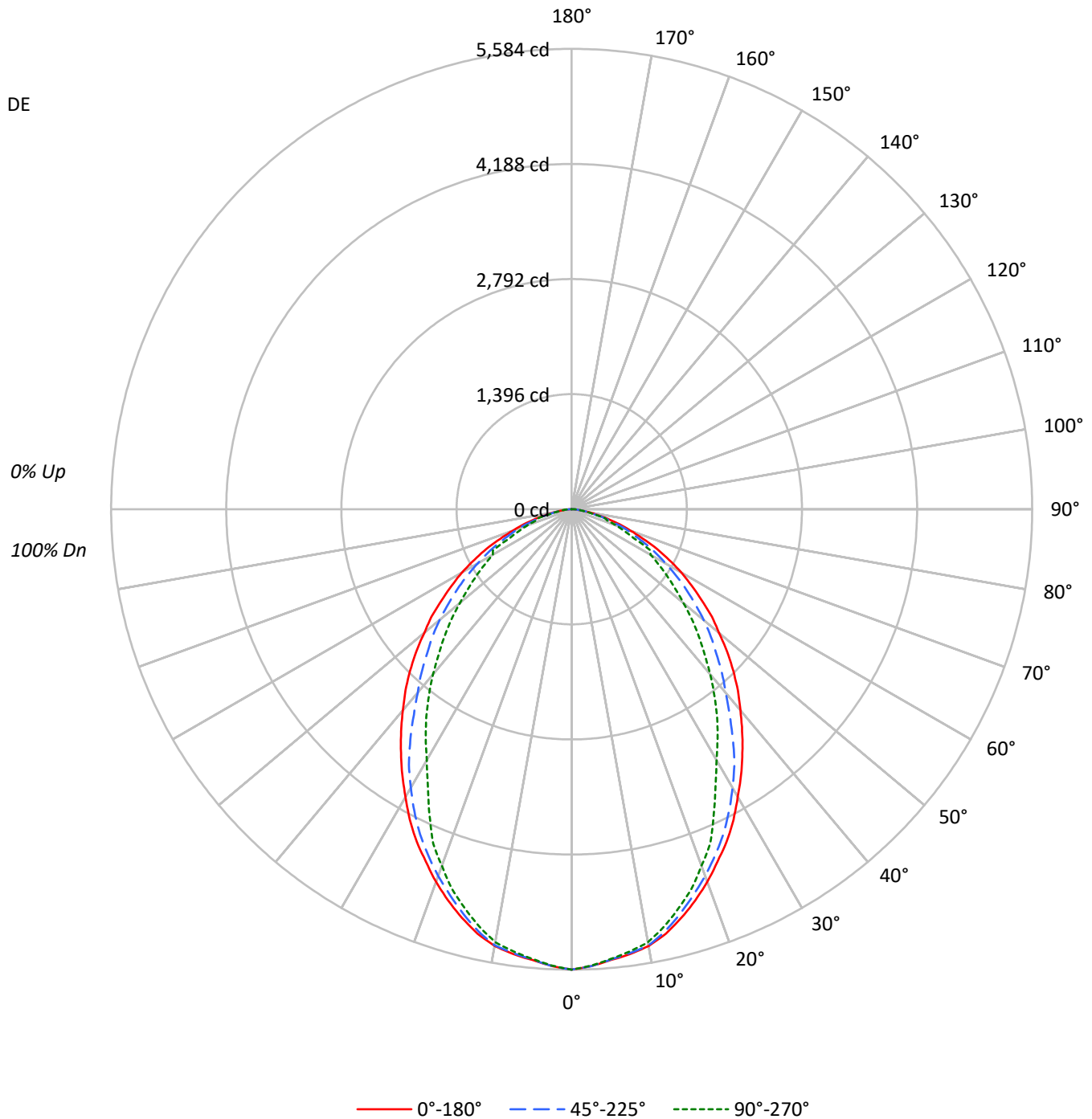
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7513	7513	7513
5°	7411	7402	7394
10°	7347	7338	7285
15°	7149	7077	6978
20°	6886	6775	6590
25°	6603	6459	6057
30°	6258	6058	5456
35°	5927	5598	5047
40°	5590	5102	4592
45°	5270	4717	4152
50°	4878	4378	3702
55°	4513	3967	3316
60°	4134	3544	2971
65°	3638	3103	2631
70°	2996	2717	2235
75°	2383	2080	2181
80°	1601	1501	1401
85°	997	1196	1396

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5270 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	519.8	4.7
10°-20°	1426.5	13.0
20°-30°	1974.9	18.0
30°-40°	2105.8	19.2
40°-50°	1921.1	17.5
50°-60°	1505.0	13.7
60°-70°	980.9	8.9
70°-80°	434.6	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°	3921.2	35.8
0°-40°	6027.0	55.0
0°-60°	9453.2	86.2
0°-90°	10962.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10962.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5584	5584	5584	5584	5584	
5°	5487	5481	5481	5474	5474	521
15°	5132	5132	5080	5029	5009	1443
25°	4448	4422	4351	4196	4080	2042
35°	3609	3583	3408	3150	3073	2256
45°	2769	2711	2479	2272	2182	2133
55°	1924	1866	1691	1491	1414	1725
65°	1143	1078	975	994	826	1126
75°	458	426	400	381	420	491
85°	65	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°	5583.9	5583.9	5583.9	5583.9	5583.9
2.5°	5545.2	5545.2	5545.2	5538.7	5538.7
5°	5487.1	5480.6	5480.6	5474.2	5474.2
7.5°	5441.9	5435.4	5429.0	5422.5	5409.6
10°	5377.3	5377.3	5370.9	5338.6	5332.1
12.5°	5274.0	5267.6	5241.8	5196.6	5183.7
15°	5132.0	5132.0	5080.4	5028.7	5009.4
17.5°	4977.1	4970.6	4906.1	4854.4	4828.6
20°	4809.3	4796.3	4731.8	4647.9	4602.7
22.5°	4622.0	4622.0	4544.6	4434.8	4389.7
25°	4447.8	4421.9	4350.9	4196.0	4079.8
27.5°	4247.6	4208.9	4131.4	3912.0	3776.4
30°	4028.2	4008.8	3899.0	3615.0	3511.7
32.5°	3821.6	3789.3	3673.1	3376.2	3292.2
35°	3608.6	3582.7	3408.4	3150.2	3072.8
37.5°	3395.5	3363.2	3143.8	2937.2	2840.4
40°	3182.5	3143.8	2904.9	2717.7	2614.4
42.5°	2982.4	2930.7	2698.3	2498.2	2382.0
45°	2769.4	2711.3	2478.9	2272.3	2181.9
47.5°	2556.3	2504.7	2291.7	2078.6	1975.3
50°	2330.4	2285.2	2091.5	1878.5	1768.8
52.5°	2143.2	2072.2	1885.0	1671.9	1581.6
55°	1923.7	1865.6	1691.3	1491.2	1413.7
57.5°	1723.6	1665.5	1504.1	1316.9	1252.3
60°	1536.4	1452.5	1316.9	1155.5	1103.9
62.5°	1329.8	1265.3	1149.1	1013.5	1078.0
65°	1142.6	1078.0	974.8	994.1	826.3
67.5°	936.0	903.8	813.4	723.0	697.2
70°	761.7	723.0	690.7	593.9	568.1
72.5°	606.8	568.1	522.9	471.2	451.9
75°	458.3	426.1	400.2	380.9	419.6
77.5°	316.3	303.4	284.0	264.7	258.2
80°	206.6	200.1	193.7	187.2	180.8
82.5°	122.7	122.7	122.7	122.7	122.7
85°	64.6	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)