

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: P563846

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-81-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563846
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-81-87-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8688.0 lumens
Efficiency: N/A
Efficacy: 92.8 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

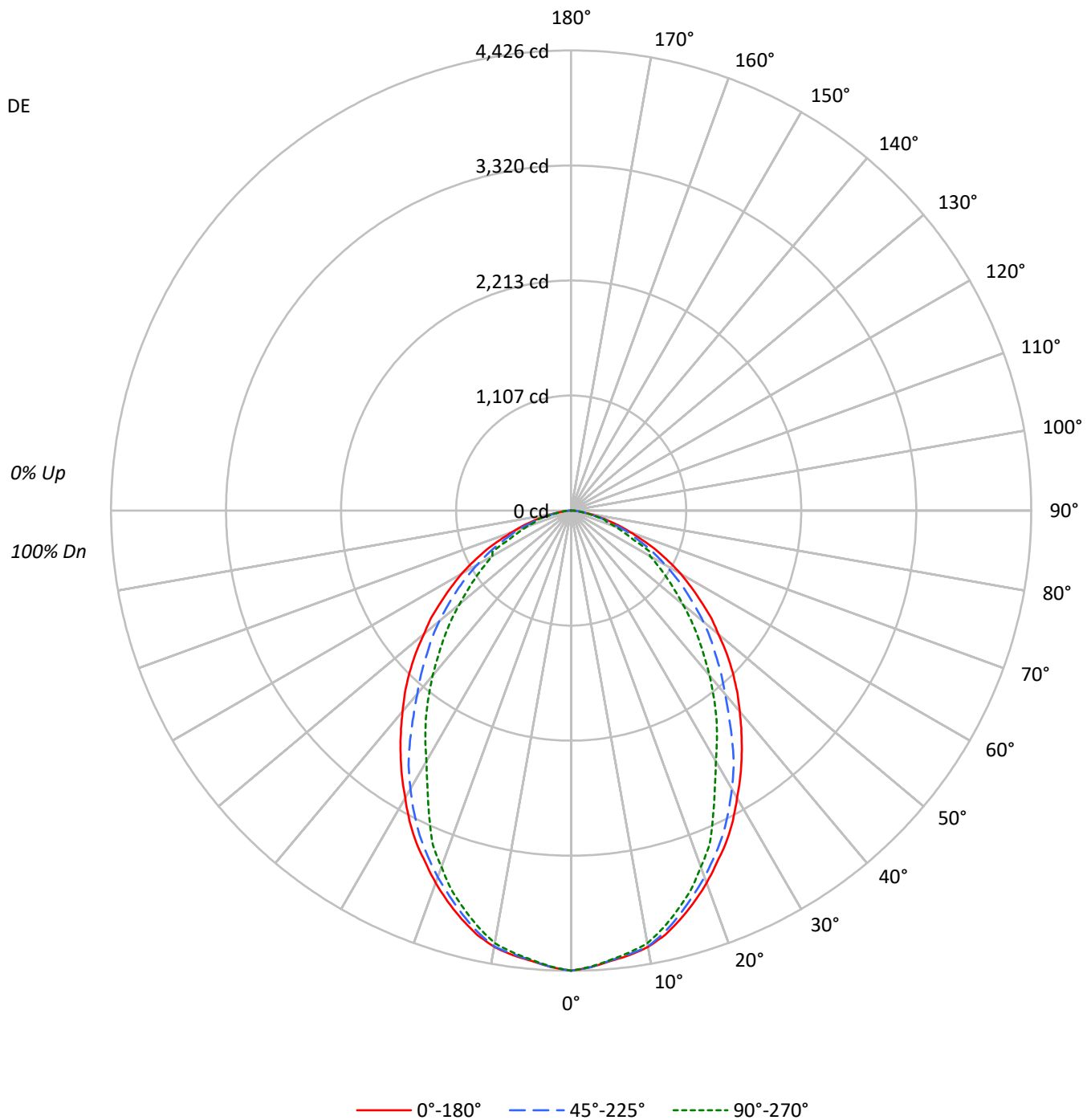
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5955	5955	5955
5°	5874	5867	5860
10°	5823	5816	5774
15°	5666	5609	5530
20°	5458	5370	5223
25°	5233	5119	4800
30°	4960	4801	4324
35°	4698	4437	4000
40°	4430	4044	3639
45°	4176	3738	3291
50°	3866	3470	2934
55°	3576	3145	2628
60°	3277	2809	2354
65°	2883	2460	2085
70°	2375	2153	1771
75°	1889	1649	1729
80°	1268	1189	1110
85°	790	948	1105

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4176 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	412.0	4.7
10°-20°	1130.6	13.0
20°-30°	1565.2	18.0
30°-40°	1669.0	19.2
40°-50°	1522.6	17.5
50°-60°	1192.8	13.7
60°-70°	777.4	8.9
70°-80°	344.4	4.0
80°-90°	73.9	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°	3107.8	35.8
0°-40°	4776.7	55.0
0°-60°	7492.2	86.2
0°-90°	8688.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8688.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4426	4426	4426	4426	4426	
5°	4349	4344	4344	4339	4339	413
15°	4067	4067	4026	3986	3970	1143
25°	3525	3505	3448	3326	3234	1618
35°	2860	2840	2701	2497	2435	1788
45°	2195	2149	1965	1801	1729	1691
55°	1525	1479	1340	1182	1120	1367
65°	906	854	773	788	655	892
75°	363	338	317	302	333	389
85°	51	56	61	66	72	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4425.6	4425.6	4425.6	4425.6	4425.6
2.5°	4394.9	4394.9	4394.9	4389.7	4389.7
5°	4348.8	4343.7	4343.7	4338.6	4338.6
7.5°	4313.0	4307.9	4302.8	4297.6	4287.4
10°	4261.8	4261.8	4256.7	4231.1	4226.0
12.5°	4180.0	4174.9	4154.4	4118.6	4108.3
15°	4067.4	4067.4	4026.5	3985.6	3970.2
17.5°	3944.6	3939.5	3888.3	3847.4	3827.0
20°	3811.6	3801.4	3750.2	3683.7	3647.9
22.5°	3663.2	3663.2	3601.8	3514.9	3479.0
25°	3525.1	3504.6	3448.3	3325.6	3233.5
27.5°	3366.5	3335.8	3274.4	3100.4	2993.0
30°	3192.5	3177.2	3090.2	2865.1	2783.2
32.5°	3028.8	3003.2	2911.1	2675.8	2609.3
35°	2860.0	2839.5	2701.4	2496.7	2435.3
37.5°	2691.1	2665.6	2491.6	2327.9	2251.1
40°	2522.3	2491.6	2302.3	2153.9	2072.1
42.5°	2363.7	2322.8	2138.6	1980.0	1887.9
45°	2194.9	2148.8	1964.6	1800.9	1729.3
47.5°	2026.0	1985.1	1816.3	1647.4	1565.6
50°	1847.0	1811.2	1657.7	1488.8	1401.9
52.5°	1698.6	1642.3	1493.9	1325.1	1253.5
55°	1524.6	1478.6	1340.5	1181.9	1120.5
57.5°	1366.0	1320.0	1192.1	1043.7	992.6
60°	1217.7	1151.2	1043.7	915.8	874.9
62.5°	1053.9	1002.8	910.7	803.3	854.4
65°	905.6	854.4	772.6	787.9	654.9
67.5°	741.9	716.3	644.6	573.0	552.6
70°	603.7	573.0	547.4	470.7	450.2
72.5°	480.9	450.2	414.4	373.5	358.1
75°	363.3	337.7	317.2	301.9	332.6
77.5°	250.7	240.5	225.1	209.8	204.6
80°	163.7	158.6	153.5	148.4	143.3
82.5°	97.2	97.2	97.2	97.2	97.2
85°	51.2	56.3	61.4	66.5	71.6
87.5°	30.7	30.7	35.8	40.9	46.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)