

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: P563826

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-80-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563826
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-80-85-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9560.0 lumens
Efficiency: N/A
Efficacy: 102.1 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

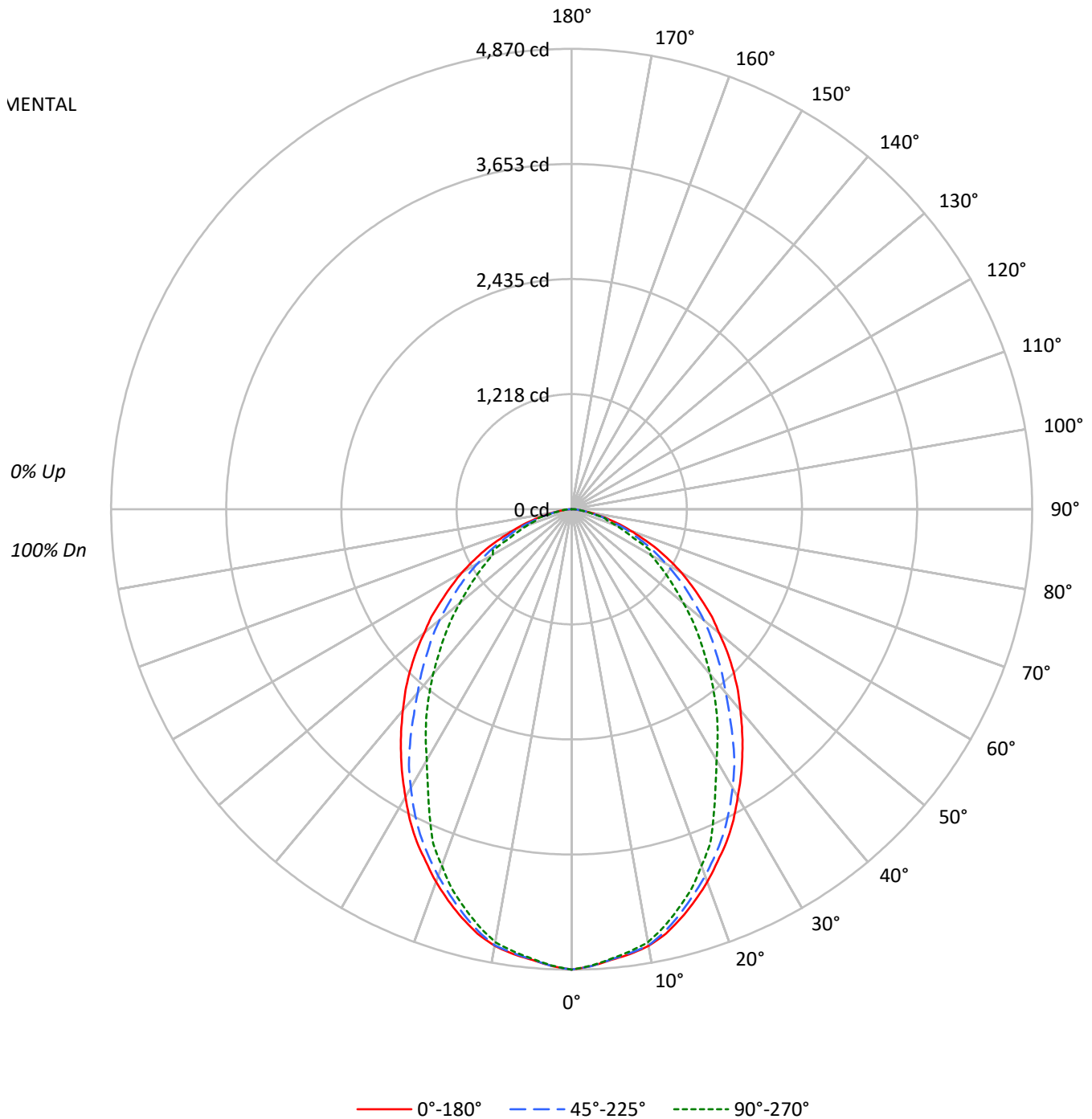
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6552	6552	6552
5°	6463	6456	6448
10°	6407	6399	6353
15°	6234	6172	6085
20°	6005	5909	5747
25°	5759	5633	5282
30°	5458	5283	4758
35°	5169	4882	4402
40°	4875	4450	4005
45°	4596	4113	3621
50°	4254	3818	3229
55°	3936	3460	2892
60°	3606	3091	2591
65°	3173	2706	2294
70°	2613	2370	1949
75°	2078	1814	1902
80°	1396	1309	1221
85°	869	1044	1216

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4596 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	453.3	4.7
10°-20°	1244.1	13.0
20°-30°	1722.3	18.0
30°-40°	1836.5	19.2
40°-50°	1675.4	17.5
50°-60°	1312.6	13.7
60°-70°	855.5	8.9
70°-80°	379.0	4.0
80°-90°	81.4	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°	3419.7	35.8
0°-40°	5256.2	55.0
0°-60°	8244.2	86.2
0°-90°	9560.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9560.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4870	4870	4870	4870	4870	
5°	4785	4780	4780	4774	4774	454
15°	4476	4476	4431	4386	4369	1258
25°	3879	3856	3794	3659	3558	1781
35°	3147	3124	2972	2747	2680	1967
45°	2415	2364	2162	1982	1903	1860
55°	1678	1627	1475	1300	1233	1505
65°	996	940	850	867	721	982
75°	400	372	349	332	366	428
85°	56	62	68	73	79	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4869.7	4869.7	4869.7	4869.7	4869.7
2.5°	4836.0	4836.0	4836.0	4830.3	4830.3
5°	4785.3	4779.7	4779.7	4774.0	4774.0
7.5°	4745.9	4740.3	4734.6	4729.0	4717.7
10°	4689.6	4689.6	4684.0	4655.8	4650.2
12.5°	4599.5	4593.9	4571.4	4532.0	4520.7
15°	4475.7	4475.7	4430.6	4385.6	4368.7
17.5°	4340.5	4334.9	4278.6	4233.6	4211.1
20°	4194.2	4182.9	4126.6	4053.4	4014.0
22.5°	4030.9	4030.9	3963.3	3867.6	3828.2
25°	3878.9	3856.4	3794.5	3659.3	3558.0
27.5°	3704.4	3670.6	3603.0	3411.6	3293.4
30°	3513.0	3496.1	3400.4	3152.7	3062.6
32.5°	3332.8	3304.7	3203.3	2944.4	2871.2
35°	3147.0	3124.5	2972.5	2747.3	2679.8
37.5°	2961.3	2933.1	2741.7	2561.5	2477.1
40°	2775.5	2741.7	2533.4	2370.1	2280.0
42.5°	2600.9	2555.9	2353.2	2178.7	2077.4
45°	2415.2	2364.5	2161.8	1981.7	1902.9
47.5°	2229.4	2184.3	1998.6	1812.8	1722.7
50°	2032.3	1992.9	1824.0	1638.3	1542.6
52.5°	1869.1	1807.2	1643.9	1458.1	1379.3
55°	1677.7	1627.0	1475.0	1300.5	1232.9
57.5°	1503.1	1452.5	1311.7	1148.5	1092.2
60°	1339.9	1266.7	1148.5	1007.7	962.7
62.5°	1159.7	1103.4	1002.1	883.9	940.2
65°	996.5	940.2	850.1	867.0	720.6
67.5°	816.3	788.2	709.3	630.5	608.0
70°	664.3	630.5	602.4	517.9	495.4
72.5°	529.2	495.4	456.0	411.0	394.1
75°	399.7	371.6	349.0	332.2	365.9
77.5°	275.9	264.6	247.7	230.8	225.2
80°	180.2	174.5	168.9	163.3	157.6
82.5°	107.0	107.0	107.0	107.0	107.0
85°	56.3	61.9	67.6	73.2	78.8
87.5°	33.8	33.8	39.4	45.0	50.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)