

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: P563927

Luminaire Tested: FSR-24-4-LD4-4LO-40-UNV-82-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563927
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-82-87-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10266.0 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

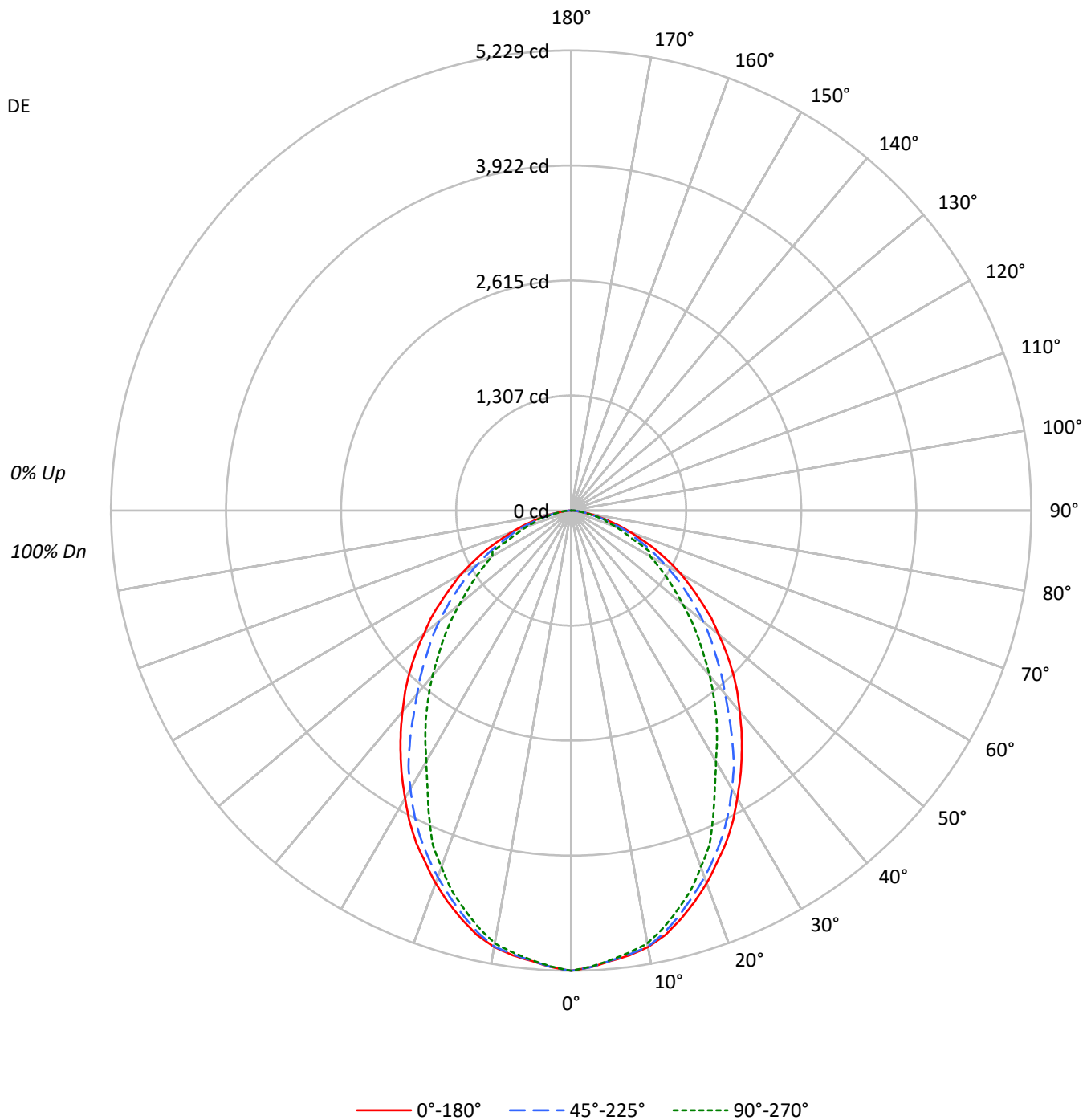
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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													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°	7036	7036	7036
5°	6940	6932	6924
10°	6880	6872	6822
15°	6695	6627	6535
20°	6449	6345	6172
25°	6184	6049	5672
30°	5861	5673	5110
35°	5551	5243	4727
40°	5235	4778	4300
45°	4935	4417	3888
50°	4568	4100	3467
55°	4226	3715	3106
60°	3872	3319	2782
65°	3407	2906	2464
70°	2806	2545	2093
75°	2231	1948	2043
80°	1499	1406	1312
85°	934	1119	1306

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4935 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	486.8	4.7
10°-20°	1335.9	13.0
20°-30°	1849.5	18.0
30°-40°	1972.1	19.2
40°-50°	1799.2	17.5
50°-60°	1409.5	13.7
60°-70°	918.6	8.9
70°-80°	407.0	4.0
80°-90°	87.4	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°	3672.2	35.8
0°-40°	5644.4	55.0
0°-60°	8853.0	86.2
0°-90°	10266.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10266.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5229	5229	5229	5229	5229	
5°	5139	5133	5133	5127	5127	488
15°	4806	4806	4758	4709	4691	1351
25°	4165	4141	4075	3930	3821	1912
35°	3379	3355	3192	2950	2878	2113
45°	2594	2539	2322	2128	2043	1998
55°	1802	1747	1584	1396	1324	1616
65°	1070	1010	913	931	774	1055
75°	429	399	375	357	393	460
85°	60	66	72	79	85	84
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5229.4	5229.4	5229.4	5229.4	5229.4
2.5°	5193.1	5193.1	5193.1	5187.0	5187.0
5°	5138.7	5132.6	5132.6	5126.6	5126.6
7.5°	5096.4	5090.3	5084.3	5078.2	5066.1
10°	5035.9	5035.9	5029.9	4999.6	4993.6
12.5°	4939.2	4933.1	4909.0	4866.6	4854.5
15°	4806.2	4806.2	4757.8	4709.4	4691.3
17.5°	4661.1	4655.0	4594.6	4546.2	4522.0
20°	4503.9	4491.8	4431.4	4352.8	4310.4
22.5°	4328.6	4328.6	4256.0	4153.3	4110.9
25°	4165.4	4141.2	4074.7	3929.6	3820.8
27.5°	3977.9	3941.7	3869.1	3663.6	3536.6
30°	3772.4	3754.3	3651.5	3385.5	3288.8
32.5°	3578.9	3548.7	3439.9	3161.8	3083.2
35°	3379.4	3355.3	3192.0	2950.2	2877.7
37.5°	3179.9	3149.7	2944.2	2750.7	2660.0
40°	2980.4	2944.2	2720.5	2545.2	2448.4
42.5°	2793.0	2744.7	2527.0	2339.6	2230.8
45°	2593.5	2539.1	2321.5	2128.0	2043.4
47.5°	2394.0	2345.7	2146.2	1946.7	1849.9
50°	2182.4	2140.1	1958.7	1759.2	1656.5
52.5°	2007.1	1940.6	1765.3	1565.8	1481.1
55°	1801.6	1747.2	1583.9	1396.5	1324.0
57.5°	1614.2	1559.7	1408.6	1233.3	1172.8
60°	1438.8	1360.2	1233.3	1082.1	1033.8
62.5°	1245.4	1184.9	1076.1	949.1	1009.6
65°	1070.1	1009.6	912.9	931.0	773.8
67.5°	876.6	846.4	761.7	677.1	652.9
70°	713.4	677.1	646.9	556.2	532.0
72.5°	568.3	532.0	489.7	441.3	423.2
75°	429.2	399.0	374.8	356.7	393.0
77.5°	296.2	284.1	266.0	247.9	241.8
80°	193.5	187.4	181.4	175.3	169.3
82.5°	114.9	114.9	114.9	114.9	114.9
85°	60.5	66.5	72.5	78.6	84.6
87.5°	36.3	36.3	42.3	48.4	54.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)