

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: P562682

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-80-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562682
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-LD4-2LO-35-UNV-80-94-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4888.0 lumens
Efficiency: N/A
Efficacy: 104.4 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

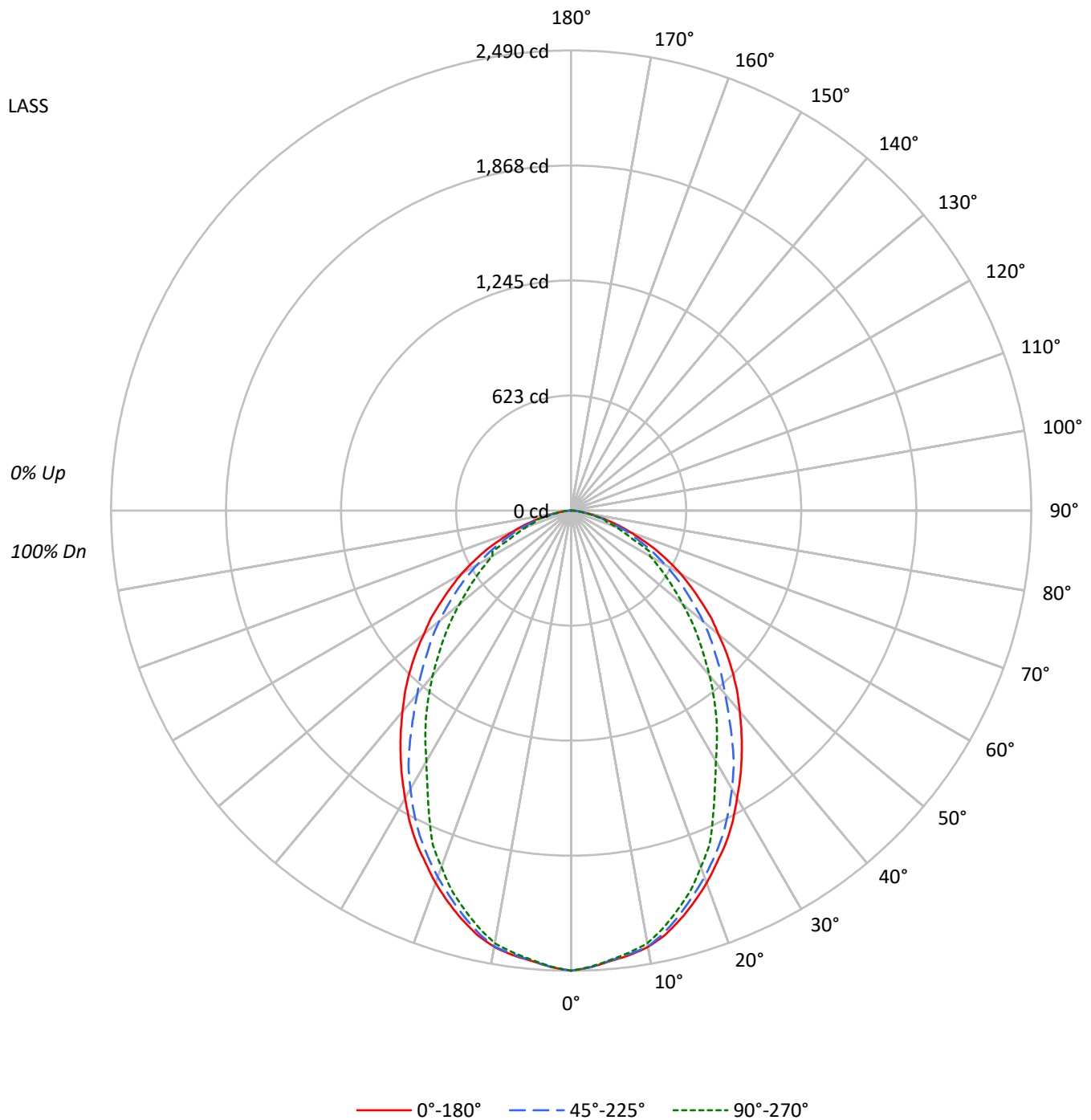
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3350	3350	3350
5°	3305	3301	3297
10°	3276	3272	3248
15°	3188	3156	3111
20°	3071	3021	2939
25°	2944	2880	2701
30°	2791	2701	2433
35°	2643	2496	2251
40°	2493	2275	2048
45°	2350	2103	1851
50°	2175	1952	1651
55°	2012	1769	1479
60°	1844	1580	1324
65°	1622	1384	1173
70°	1336	1212	996
75°	1063	928	973
80°	714	669	625
85°	445	533	622

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2350 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	231.8	4.7
10°-20°	636.1	13.0
20°-30°	880.6	18.0
30°-40°	939.0	19.2
40°-50°	856.6	17.5
50°-60°	671.1	13.7
60°-70°	437.4	8.9
70°-80°	193.8	4.0
80°-90°	41.6	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°	1748.5	35.8
0°-40°	2687.5	55.0
0°-60°	4215.2	86.2
0°-90°	4888.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4888.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2490	2490	2490	2490	2490	
5°	2447	2444	2444	2441	2441	232
15°	2288	2288	2265	2242	2234	643
25°	1983	1972	1940	1871	1819	911
35°	1609	1598	1520	1405	1370	1006
45°	1235	1209	1105	1013	973	951
55°	858	832	754	665	630	769
65°	510	481	435	443	368	502
75°	204	190	178	170	187	219
85°	29	32	34	37	40	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2489.9	2489.9	2489.9	2489.9	2489.9
2.5°	2472.6	2472.6	2472.6	2469.7	2469.7
5°	2446.7	2443.8	2443.8	2440.9	2440.9
7.5°	2426.6	2423.7	2420.8	2417.9	2412.2
10°	2397.8	2397.8	2394.9	2380.5	2377.6
12.5°	2351.7	2348.8	2337.3	2317.2	2311.4
15°	2288.4	2288.4	2265.4	2242.3	2233.7
17.5°	2219.3	2216.4	2187.6	2164.6	2153.1
20°	2144.5	2138.7	2109.9	2072.5	2052.4
22.5°	2061.0	2061.0	2026.4	1977.5	1957.4
25°	1983.3	1971.8	1940.1	1871.0	1819.2
27.5°	1894.0	1876.8	1842.2	1744.4	1683.9
30°	1796.2	1787.5	1738.6	1611.9	1565.9
32.5°	1704.1	1689.7	1637.9	1505.4	1468.0
35°	1609.1	1597.6	1519.8	1404.7	1370.2
37.5°	1514.1	1499.7	1401.8	1309.7	1266.5
40°	1419.1	1401.8	1295.3	1211.8	1165.8
42.5°	1329.9	1306.8	1203.2	1114.0	1062.2
45°	1234.9	1209.0	1105.3	1013.2	972.9
47.5°	1139.9	1116.8	1021.9	926.9	880.8
50°	1039.1	1019.0	932.6	837.6	788.7
52.5°	955.7	924.0	840.5	745.5	705.2
55°	857.8	831.9	754.2	664.9	630.4
57.5°	768.6	742.6	670.7	587.2	558.4
60°	685.1	647.7	587.2	515.2	492.2
62.5°	593.0	564.2	512.4	451.9	480.7
65°	509.5	480.7	434.6	443.3	368.4
67.5°	417.4	403.0	362.7	322.4	310.9
70°	339.7	322.4	308.0	264.8	253.3
72.5°	270.6	253.3	233.2	210.1	201.5
75°	204.4	190.0	178.5	169.8	187.1
77.5°	141.0	135.3	126.7	118.0	115.1
80°	92.1	89.2	86.4	83.5	80.6
82.5°	54.7	54.7	54.7	54.7	54.7
85°	28.8	31.7	34.5	37.4	40.3
87.5°	17.3	17.3	20.1	23.0	25.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)