

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: P562608

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562608
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-LD4-2HI-50-UNV-80-84-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8555.0 lumens
Efficiency: N/A
Efficacy: 99.0 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

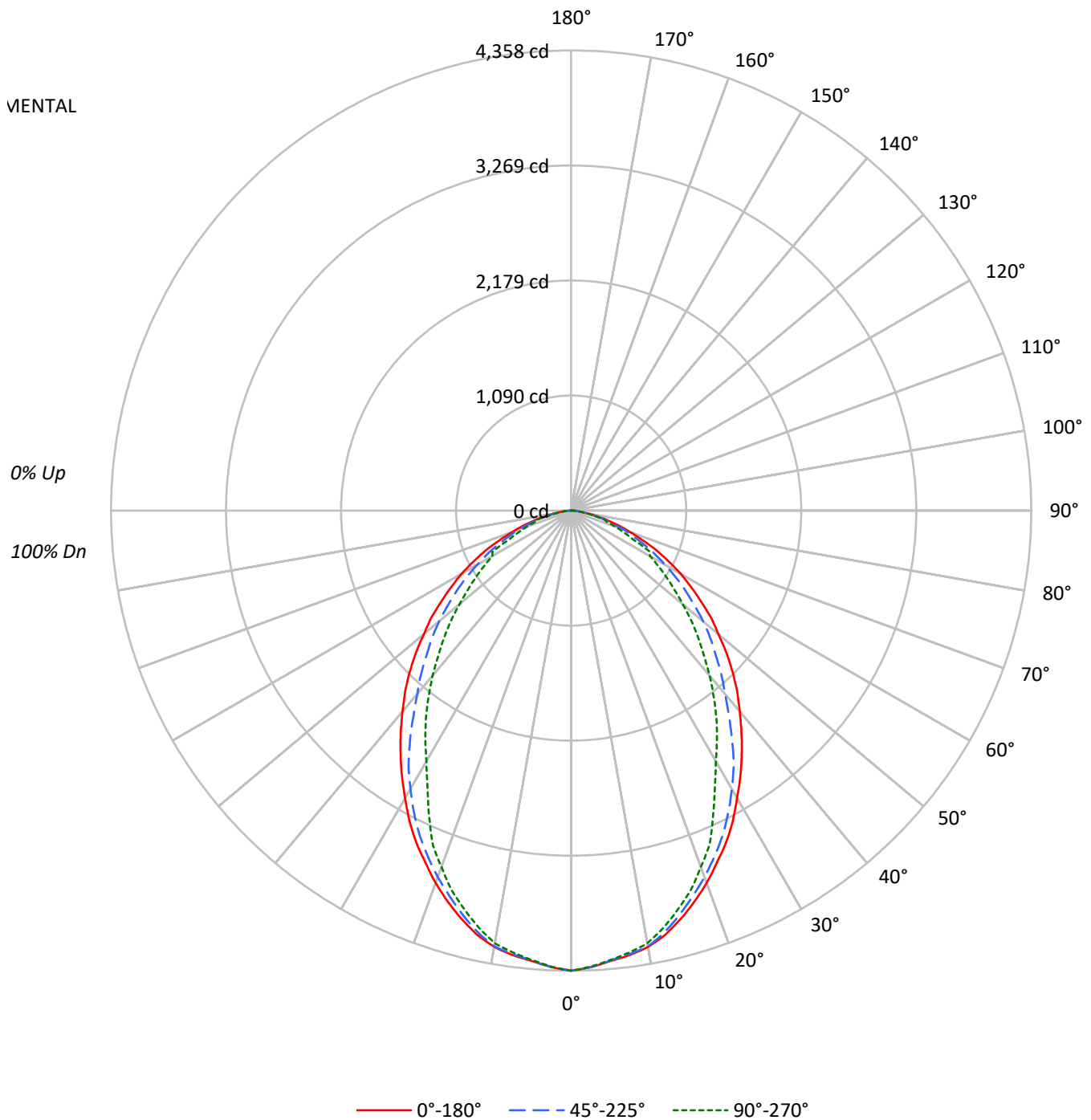
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5863	5863	5863
5°	5784	5777	5770
10°	5734	5727	5685
15°	5579	5523	5446
20°	5374	5287	5143
25°	5153	5041	4727
30°	4884	4728	4258
35°	4626	4369	3939
40°	4362	3982	3584
45°	4113	3681	3240
50°	3807	3417	2889
55°	3522	3096	2588
60°	3226	2766	2318
65°	2839	2422	2053
70°	2339	2121	1744
75°	1860	1624	1703
80°	1249	1171	1093
85°	778	934	1088

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4113 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	405.7	4.7
10°-20°	1113.3	13.0
20°-30°	1541.3	18.0
30°-40°	1643.4	19.2
40°-50°	1499.3	17.5
50°-60°	1174.6	13.7
60°-70°	765.5	8.9
70°-80°	339.2	4.0
80°-90°	72.8	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°	3060.2	35.8
0°-40°	4703.6	55.0
0°-60°	7377.5	86.2
0°-90°	8555.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8555.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4358	4358	4358	4358	4358	
5°	4282	4277	4277	4272	4272	406
15°	4005	4005	3965	3924	3909	1126
25°	3471	3451	3396	3275	3184	1594
35°	2816	2796	2660	2458	2398	1761
45°	2161	2116	1935	1773	1703	1665
55°	1501	1456	1320	1164	1103	1347
65°	892	841	761	776	645	879
75°	358	332	312	297	328	383
85°	50	55	60	66	70	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4357.8	4357.8	4357.8	4357.8	4357.8
2.5°	4327.6	4327.6	4327.6	4322.5	4322.5
5°	4282.2	4277.2	4277.2	4272.2	4272.2
7.5°	4247.0	4241.9	4236.9	4231.9	4221.8
10°	4196.6	4196.6	4191.6	4166.4	4161.3
12.5°	4116.0	4110.9	4090.8	4055.5	4045.5
15°	4005.1	4005.1	3964.8	3924.5	3909.4
17.5°	3884.2	3879.2	3828.8	3788.5	3768.4
20°	3753.3	3743.2	3692.8	3627.3	3592.0
22.5°	3607.2	3607.2	3546.7	3461.1	3425.8
25°	3471.1	3451.0	3395.6	3274.6	3184.0
27.5°	3315.0	3284.7	3224.3	3053.0	2947.2
30°	3143.7	3128.5	3042.9	2821.2	2740.6
32.5°	2982.4	2957.3	2866.6	2634.8	2569.3
35°	2816.2	2796.0	2660.0	2458.5	2398.1
37.5°	2649.9	2624.8	2453.5	2292.3	2216.7
40°	2483.7	2453.5	2267.1	2121.0	2040.4
42.5°	2327.5	2287.2	2105.9	1949.7	1859.0
45°	2161.3	2115.9	1934.6	1773.3	1702.8
47.5°	1995.0	1954.7	1788.5	1622.2	1541.6
50°	1818.7	1783.4	1632.3	1466.0	1380.4
52.5°	1672.6	1617.2	1471.1	1304.8	1234.3
55°	1501.3	1456.0	1319.9	1163.8	1103.3
57.5°	1345.1	1299.8	1173.8	1027.7	977.4
60°	1199.0	1133.5	1027.7	901.8	861.5
62.5°	1037.8	987.4	896.8	791.0	841.3
65°	891.7	841.3	760.7	775.8	644.9
67.5°	730.5	705.3	634.8	564.2	544.1
70°	594.5	564.2	539.1	463.5	443.3
72.5°	473.6	443.3	408.1	367.8	352.7
75°	357.7	332.5	312.4	297.2	327.5
77.5°	246.9	236.8	221.7	206.6	201.5
80°	161.2	156.2	151.1	146.1	141.1
82.5°	95.7	95.7	95.7	95.7	95.7
85°	50.4	55.4	60.5	65.5	70.5
87.5°	30.2	30.2	35.3	40.3	45.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)