

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: P561585

Luminaire Tested: FSR-12-4-LD4-2LO-40-UNV-80-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561585
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-12-4-LD4-2LO-40-UNV-80-84-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5010.0 lumens
Efficiency: N/A
Efficacy: 107.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

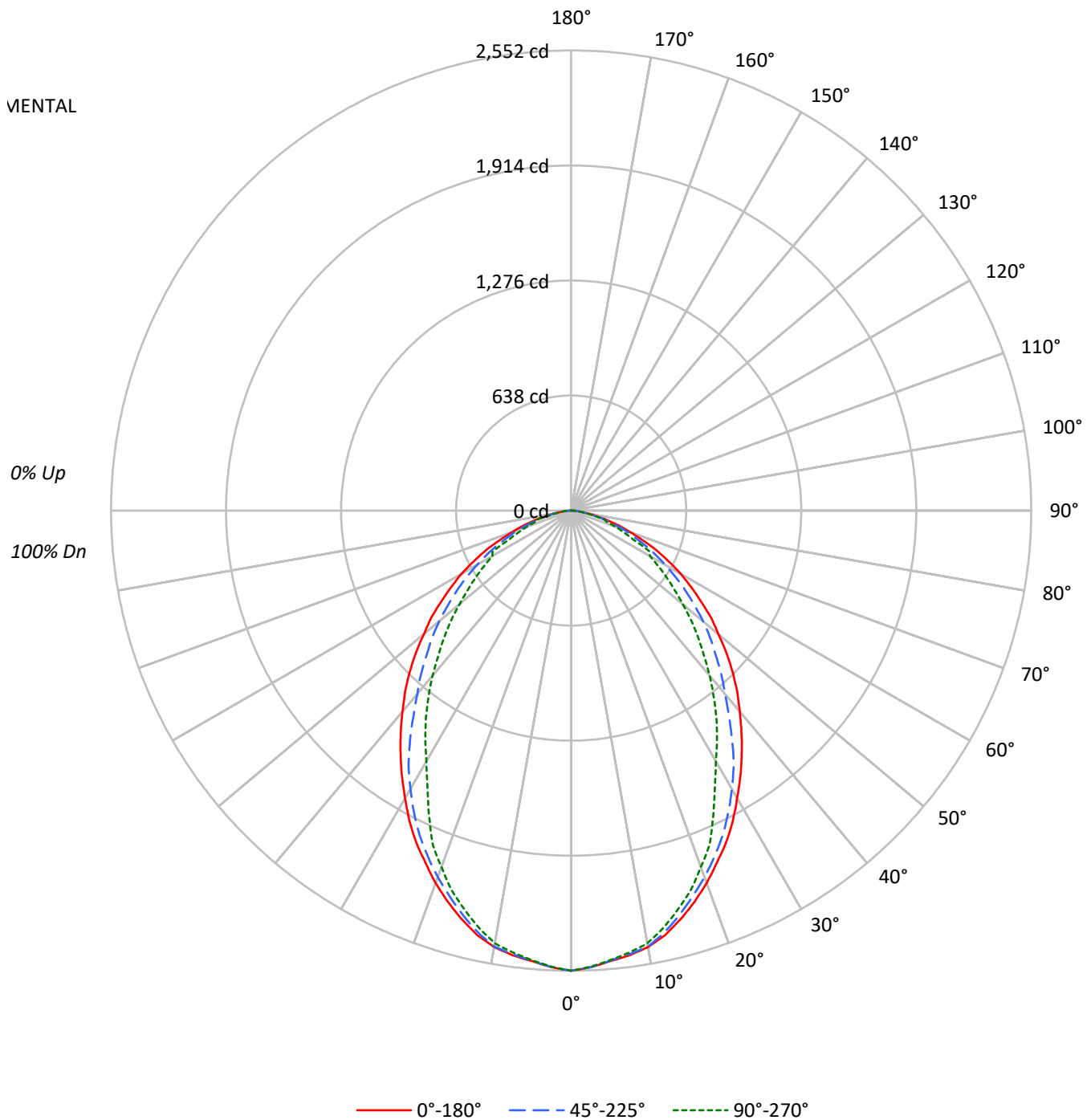
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6867	6867	6867
5°	6774	6766	6758
10°	6715	6707	6659
15°	6534	6469	6378
20°	6294	6193	6024
25°	6036	5904	5536
30°	5720	5537	4987
35°	5418	5117	4614
40°	5109	4664	4197
45°	4817	4311	3795
50°	4459	4002	3384
55°	4125	3627	3031
60°	3779	3239	2715
65°	3325	2837	2404
70°	2739	2484	2043
75°	2178	1902	1994
80°	1463	1371	1280
85°	911	1093	1275

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4817 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	237.6	4.7
10°-20°	652.0	13.0
20°-30°	902.6	18.0
30°-40°	962.4	19.2
40°-50°	878.0	17.5
50°-60°	687.9	13.7
60°-70°	448.3	8.9
70°-80°	198.6	4.0
80°-90°	42.7	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°	1792.1	35.8
0°-40°	2754.5	55.0
0°-60°	4320.4	86.2
0°-90°	5010.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5010.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2552	2552	2552	2552	2552	
5°	2508	2505	2505	2502	2502	238
15°	2346	2346	2322	2298	2289	659
25°	2033	2021	1988	1918	1865	933
35°	1649	1637	1558	1440	1404	1031
45°	1266	1239	1133	1038	997	975
55°	879	853	773	682	646	789
65°	522	493	446	454	378	515
75°	210	195	183	174	192	225
85°	30	32	35	38	41	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2552.0	2552.0	2552.0	2552.0	2552.0
2.5°	2534.3	2534.3	2534.3	2531.4	2531.4
5°	2507.8	2504.8	2504.8	2501.9	2501.9
7.5°	2487.1	2484.2	2481.2	2478.3	2472.4
10°	2457.6	2457.6	2454.7	2439.9	2437.0
12.5°	2410.4	2407.5	2395.7	2375.0	2369.1
15°	2345.5	2345.5	2321.9	2298.3	2289.4
17.5°	2274.7	2271.7	2242.2	2218.6	2206.8
20°	2198.0	2192.1	2162.6	2124.2	2103.6
22.5°	2112.4	2112.4	2077.0	2026.9	2006.2
25°	2032.8	2021.0	1988.5	1917.7	1864.6
27.5°	1941.3	1923.6	1888.2	1787.9	1725.9
30°	1841.0	1832.1	1782.0	1652.2	1605.0
32.5°	1746.6	1731.8	1678.7	1543.0	1504.7
35°	1649.2	1637.4	1557.8	1439.8	1404.4
37.5°	1551.9	1537.1	1436.8	1342.4	1298.1
40°	1454.5	1436.8	1327.6	1242.1	1194.9
42.5°	1363.0	1339.4	1233.2	1141.8	1088.7
45°	1265.7	1239.1	1132.9	1038.5	997.2
47.5°	1168.3	1144.7	1047.4	950.0	902.8
50°	1065.1	1044.4	955.9	858.5	808.4
52.5°	979.5	947.1	861.5	764.1	722.8
55°	879.2	852.6	773.0	681.5	646.1
57.5°	787.7	761.2	687.4	601.9	572.4
60°	702.2	663.8	601.9	528.1	504.5
62.5°	607.8	578.3	525.2	463.2	492.7
65°	522.2	492.7	445.5	454.3	377.6
67.5°	427.8	413.0	371.7	330.4	318.6
70°	348.1	330.4	315.7	271.4	259.6
72.5°	277.3	259.6	239.0	215.4	206.5
75°	209.5	194.7	182.9	174.1	191.8
77.5°	144.6	138.7	129.8	121.0	118.0
80°	94.4	91.5	88.5	85.6	82.6
82.5°	56.1	56.1	56.1	56.1	56.1
85°	29.5	32.5	35.4	38.4	41.3
87.5°	17.7	17.7	20.7	23.6	26.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)