

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: P563504

Luminaire Tested: FSR-24-4-LD4-3STD-40-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563504
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-LD4-3STD-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9935.0 lumens
Efficiency: N/A
Efficacy: 99.4 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

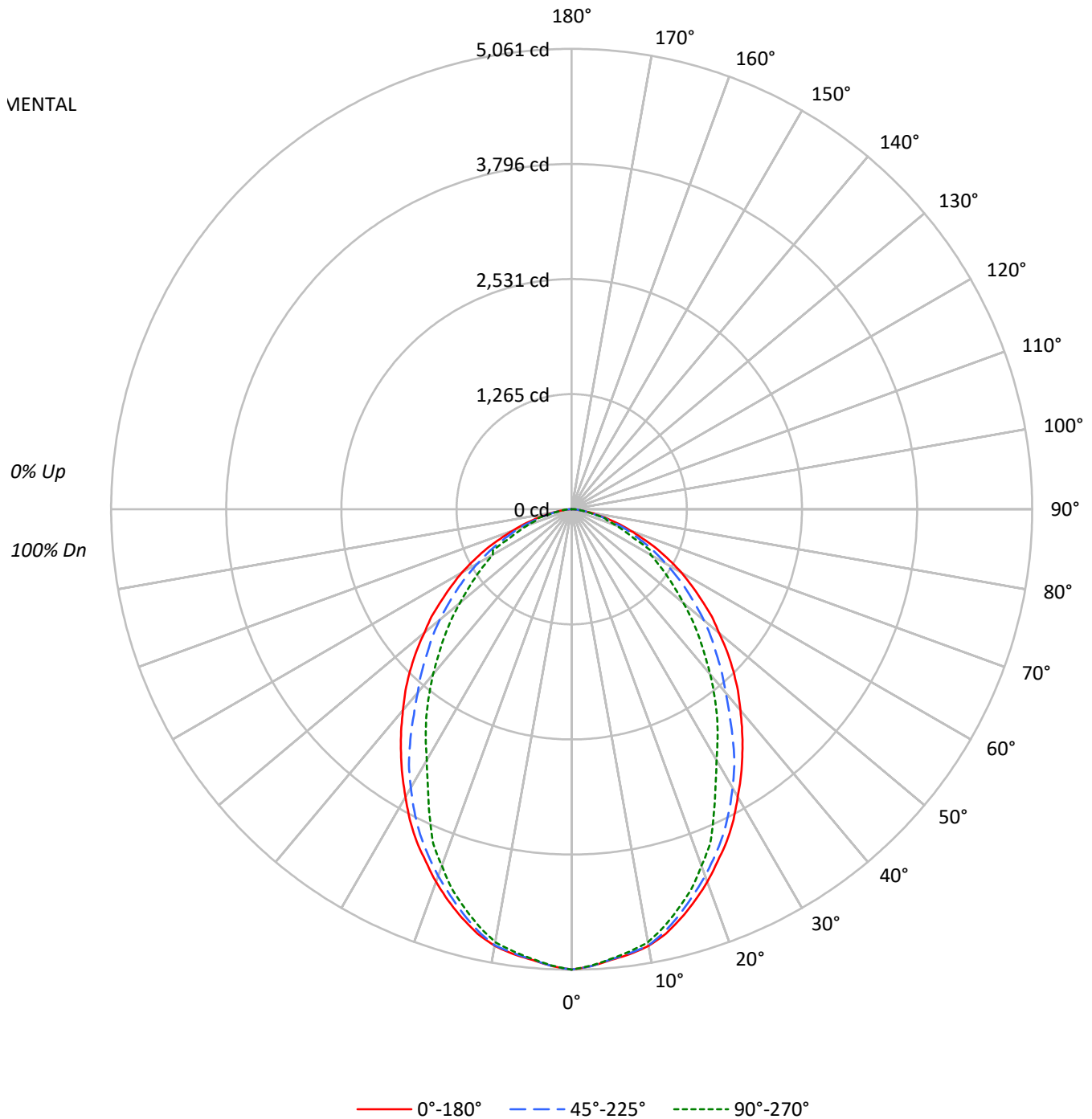
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6809	6809	6809
5°	6717	6709	6701
10°	6658	6650	6603
15°	6479	6414	6324
20°	6241	6140	5973
25°	5985	5854	5489
30°	5672	5490	4945
35°	5372	5074	4574
40°	5066	4624	4162
45°	4776	4275	3763
50°	4421	3968	3356
55°	4090	3596	3006
60°	3747	3212	2692
65°	3297	2812	2384
70°	2716	2463	2026
75°	2159	1886	1977
80°	1450	1360	1269
85°	903	1084	1264

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4776 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	471.1	4.7
10°-20°	1292.9	13.0
20°-30°	1789.9	18.0
30°-40°	1908.5	19.2
40°-50°	1741.1	17.5
50°-60°	1364.1	13.7
60°-70°	889.0	8.9
70°-80°	393.9	4.0
80°-90°	84.6	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°	3553.8	35.8
0°-40°	5462.4	55.0
0°-60°	8567.6	86.2
0°-90°	9935.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9935.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5061	5061	5061	5061	5061	
5°	4973	4967	4967	4961	4961	472
15°	4651	4651	4604	4558	4540	1308
25°	4031	4008	3943	3803	3698	1851
35°	3270	3247	3089	2855	2785	2045
45°	2510	2457	2247	2059	1978	1933
55°	1744	1691	1533	1352	1281	1564
65°	1036	977	883	901	749	1021
75°	415	386	363	345	380	445
85°	58	64	70	76	82	81
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5060.8	5060.8	5060.8	5060.8	5060.8
2.5°	5025.7	5025.7	5025.7	5019.8	5019.8
5°	4973.0	4967.1	4967.1	4961.3	4961.3
7.5°	4932.0	4926.2	4920.3	4914.5	4902.8
10°	4873.5	4873.5	4867.7	4838.4	4832.6
12.5°	4779.9	4774.1	4750.7	4709.7	4698.0
15°	4651.2	4651.2	4604.4	4557.6	4540.1
17.5°	4510.8	4505.0	4446.4	4399.6	4376.2
20°	4358.7	4347.0	4288.5	4212.4	4171.5
22.5°	4189.0	4189.0	4118.8	4019.4	3978.4
25°	4031.1	4007.7	3943.3	3802.9	3697.6
27.5°	3849.7	3814.6	3744.4	3545.5	3422.6
30°	3650.8	3633.2	3533.8	3276.3	3182.7
32.5°	3463.5	3434.3	3329.0	3059.9	2983.8
35°	3270.5	3247.1	3089.1	2855.1	2784.9
37.5°	3077.4	3048.2	2849.2	2662.0	2574.3
40°	2884.3	2849.2	2632.8	2463.1	2369.5
42.5°	2703.0	2656.2	2445.5	2264.2	2158.9
45°	2509.9	2457.2	2246.6	2059.4	1977.5
47.5°	2316.8	2270.0	2077.0	1883.9	1790.3
50°	2112.1	2071.1	1895.6	1702.5	1603.1
52.5°	1942.4	1878.0	1708.4	1515.3	1433.4
55°	1743.5	1690.8	1532.9	1351.5	1281.3
57.5°	1562.1	1509.5	1363.2	1193.5	1135.0
60°	1392.4	1316.4	1193.5	1047.3	1000.5
62.5°	1205.2	1146.7	1041.4	918.5	977.0
65°	1035.6	977.0	883.4	901.0	748.9
67.5°	848.3	819.1	737.2	655.3	631.9
70°	690.4	655.3	626.0	538.3	514.9
72.5°	550.0	514.9	473.9	427.1	409.5
75°	415.4	386.1	362.7	345.2	380.3
77.5°	286.7	275.0	257.4	239.9	234.0
80°	187.2	181.4	175.5	169.7	163.8
82.5°	111.2	111.2	111.2	111.2	111.2
85°	58.5	64.4	70.2	76.1	81.9
87.5°	35.1	35.1	41.0	46.8	52.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)