

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: P563509

Luminaire Tested: FSR-24-4-LD4-3STD-40-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563509
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-80-86-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11459.0 lumens
Efficiency: N/A
Efficacy: 114.7 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

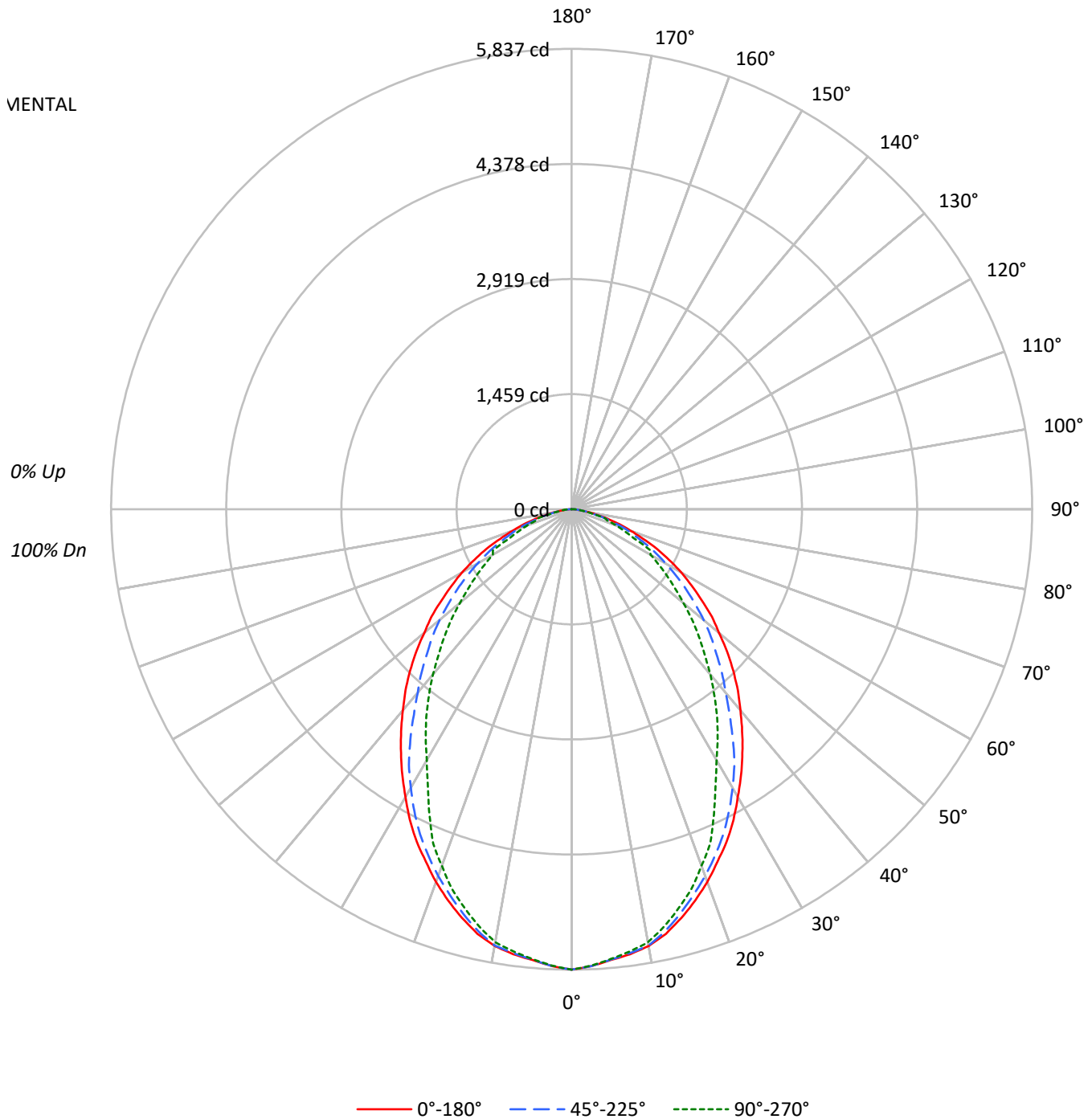
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																												
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°	7854	7854	7854
5°	7747	7738	7729
10°	7680	7671	7615
15°	7473	7398	7294
20°	7198	7082	6889
25°	6902	6752	6331
30°	6542	6332	5703
35°	6196	5852	5276
40°	5843	5334	4800
45°	5508	4931	4340
50°	5099	4577	3870
55°	4717	4147	3467
60°	4322	3704	3105
65°	3803	3244	2750
70°	3133	2840	2336
75°	2491	2175	2280
80°	1673	1568	1464
85°	1042	1250	1459

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5508 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	543.4	4.7
10°-20°	1491.2	13.0
20°-30°	2064.4	18.0
30°-40°	2201.3	19.2
40°-50°	2008.2	17.5
50°-60°	1573.3	13.7
60°-70°	1025.4	8.9
70°-80°	454.3	4.0
80°-90°	97.5	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°	4099.0	35.8
0°-40°	6300.3	55.0
0°-60°	9881.8	86.2
0°-90°	11459.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11459.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5837	5837	5837	5837	5837	
5°	5736	5729	5729	5722	5722	544
15°	5365	5365	5311	5257	5236	1508
25°	4649	4622	4548	4386	4265	2135
35°	3772	3745	3563	3293	3212	2358
45°	2895	2834	2591	2375	2281	2230
55°	2011	1950	1768	1559	1478	1804
65°	1194	1127	1019	1039	864	1177
75°	479	445	418	398	439	513
85°	68	74	81	88	94	94
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5837.1	5837.1	5837.1	5837.1	5837.1
2.5°	5796.6	5796.6	5796.6	5789.8	5789.8
5°	5735.8	5729.1	5729.1	5722.3	5722.3
7.5°	5688.6	5681.9	5675.1	5668.4	5654.9
10°	5621.1	5621.1	5614.4	5580.6	5573.9
12.5°	5513.2	5506.4	5479.4	5432.2	5418.7
15°	5364.7	5364.7	5310.7	5256.7	5236.5
17.5°	5202.7	5196.0	5128.5	5074.5	5047.5
20°	5027.3	5013.8	4946.3	4858.6	4811.4
22.5°	4831.6	4831.6	4750.6	4635.9	4588.7
25°	4649.4	4622.4	4548.2	4386.2	4264.8
27.5°	4440.2	4399.7	4318.8	4089.3	3947.6
30°	4210.8	4190.5	4075.8	3778.9	3670.9
32.5°	3994.8	3961.1	3839.6	3529.2	3441.5
35°	3772.2	3745.2	3563.0	3293.0	3212.1
37.5°	3549.5	3515.7	3286.3	3070.4	2969.1
40°	3326.8	3286.3	3036.6	2840.9	2733.0
42.5°	3117.6	3063.6	2820.7	2611.5	2490.0
45°	2894.9	2834.2	2591.3	2375.3	2280.8
47.5°	2672.2	2618.2	2395.6	2172.9	2064.9
50°	2436.0	2388.8	2186.4	1963.7	1849.0
52.5°	2240.4	2166.1	1970.4	1747.7	1653.3
55°	2010.9	1950.2	1768.0	1558.8	1477.8
57.5°	1801.7	1741.0	1572.3	1376.6	1309.1
60°	1606.0	1518.3	1376.6	1207.9	1153.9
62.5°	1390.1	1322.6	1201.2	1059.4	1126.9
65°	1194.4	1126.9	1019.0	1039.2	863.8
67.5°	978.5	944.7	850.3	755.8	728.8
70°	796.3	755.8	722.0	620.8	593.8
72.5°	634.3	593.8	546.6	492.6	472.4
75°	479.1	445.4	418.4	398.1	438.6
77.5°	330.7	317.2	296.9	276.7	269.9
80°	215.9	209.2	202.4	195.7	188.9
82.5°	128.2	128.2	128.2	128.2	128.2
85°	67.5	74.2	81.0	87.7	94.5
87.5°	40.5	40.5	47.2	54.0	60.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)