

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: P563891

Luminaire Tested: FSR-24-4-LD4-4LO-40-UNV-80-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563891
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-LD4-4LO-40-UNV-80-85-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11539.0 lumens
Efficiency: N/A
Efficacy: 123.3 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

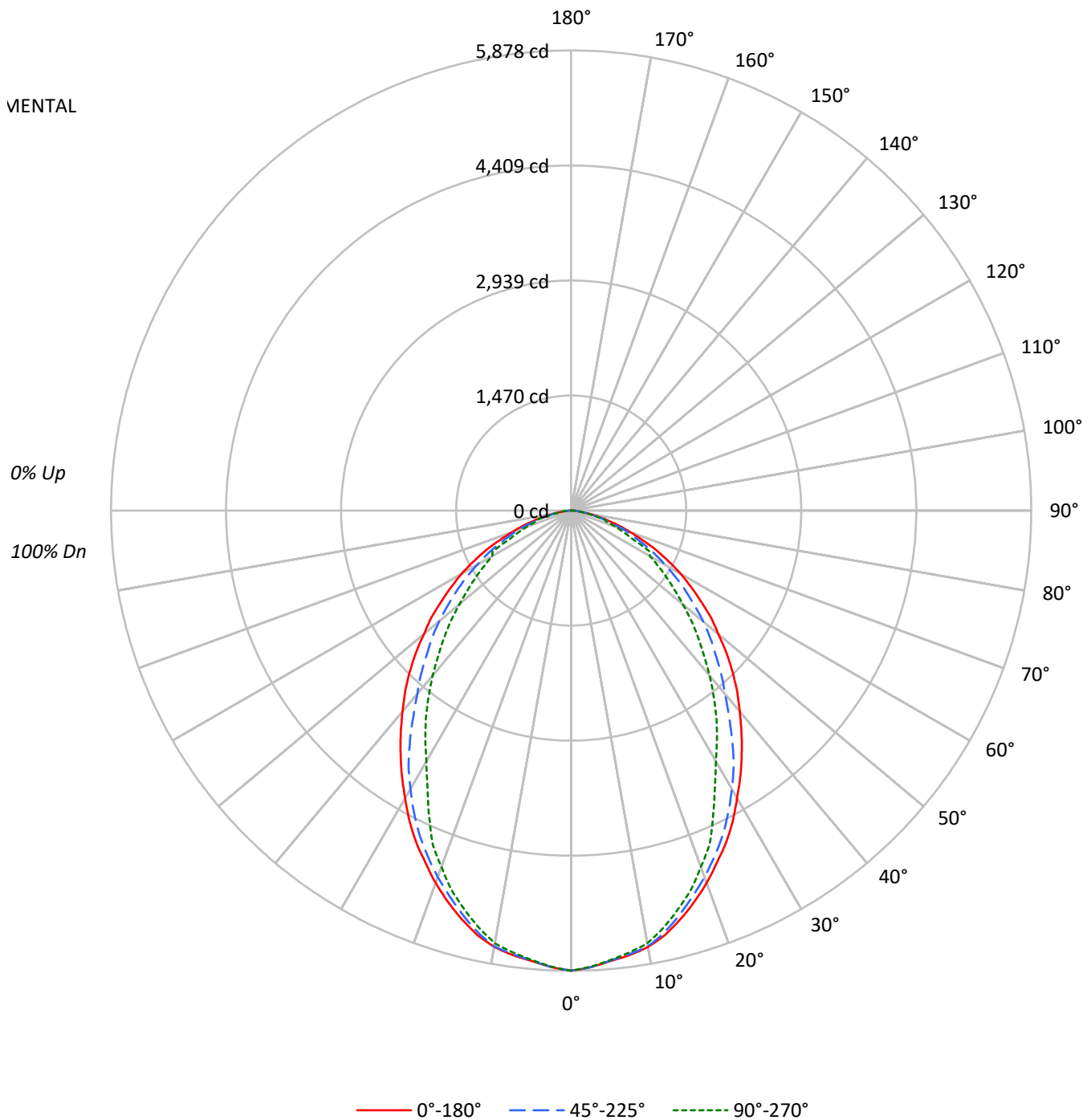
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7909	7909	7909
5°	7801	7792	7783
10°	7733	7724	7668
15°	7525	7449	7345
20°	7249	7132	6937
25°	6951	6799	6376
30°	6588	6377	5743
35°	6239	5893	5313
40°	5884	5371	4834
45°	5547	4965	4370
50°	5135	4608	3897
55°	4750	4176	3491
60°	4352	3730	3127
65°	3829	3267	2769
70°	3154	2860	2353
75°	2508	2190	2296
80°	1684	1580	1475
85°	1050	1258	1468

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5547 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	547.1	4.7
10°-20°	1501.6	13.0
20°-30°	2078.9	18.0
30°-40°	2216.7	19.2
40°-50°	2022.2	17.5
50°-60°	1584.3	13.7
60°-70°	1032.6	8.9
70°-80°	457.5	4.0
80°-90°	98.2	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°	4127.6	35.8
0°-40°	6344.3	55.0
0°-60°	9950.8	86.2
0°-90°	11539.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11539.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5878	5878	5878	5878	5878	
5°	5776	5769	5769	5762	5762	548
15°	5402	5402	5348	5293	5273	1519
25°	4682	4655	4580	4417	4294	2149
35°	3798	3771	3588	3316	3234	2375
45°	2915	2854	2609	2392	2297	2246
55°	2025	1964	1780	1570	1488	1816
65°	1203	1135	1026	1046	870	1185
75°	482	448	421	401	442	517
85°	68	75	82	88	95	94
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5877.8	5877.8	5877.8	5877.8	5877.8
2.5°	5837.0	5837.0	5837.0	5830.2	5830.2
5°	5775.9	5769.1	5769.1	5762.3	5762.3
7.5°	5728.3	5721.5	5714.7	5707.9	5694.3
10°	5660.4	5660.4	5653.6	5619.6	5612.8
12.5°	5551.6	5544.8	5517.7	5470.1	5456.5
15°	5402.2	5402.2	5347.8	5293.4	5273.0
17.5°	5239.1	5232.3	5164.3	5110.0	5082.8
20°	5062.4	5048.8	4980.9	4892.5	4844.9
22.5°	4865.3	4865.3	4783.8	4668.3	4620.7
25°	4681.9	4654.7	4579.9	4416.9	4294.5
27.5°	4471.2	4430.4	4348.9	4117.9	3975.2
30°	4240.2	4219.8	4104.3	3805.3	3696.6
32.5°	4022.7	3988.8	3866.4	3553.9	3465.5
35°	3798.5	3771.3	3587.8	3316.0	3234.5
37.5°	3574.3	3540.3	3309.2	3091.8	2989.9
40°	3350.0	3309.2	3057.8	2860.8	2752.0
42.5°	3139.4	3085.0	2840.4	2629.7	2507.4
45°	2915.1	2854.0	2609.3	2391.9	2296.8
47.5°	2690.9	2636.5	2412.3	2188.0	2079.3
50°	2453.1	2405.5	2201.6	1977.4	1861.9
52.5°	2256.0	2181.2	1984.2	1759.9	1664.8
55°	2025.0	1963.8	1780.3	1569.7	1488.1
57.5°	1814.3	1753.2	1583.3	1386.2	1318.3
60°	1617.2	1528.9	1386.2	1216.3	1162.0
62.5°	1399.8	1331.9	1209.5	1066.8	1134.8
65°	1202.7	1134.8	1026.1	1046.5	869.8
67.5°	985.3	951.3	856.2	761.1	733.9
70°	801.8	761.1	727.1	625.2	598.0
72.5°	638.7	598.0	550.4	496.0	475.7
75°	482.5	448.5	421.3	400.9	441.7
77.5°	333.0	319.4	299.0	278.6	271.8
80°	217.4	210.6	203.9	197.1	190.3
82.5°	129.1	129.1	129.1	129.1	129.1
85°	68.0	74.7	81.5	88.3	95.1
87.5°	40.8	40.8	47.6	54.4	61.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)