

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: P563507

Luminaire Tested: FSR-24-4-LD4-3STD-40-UNV-80-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563507
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-80-85-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11590.0 lumens
Efficiency: N/A
Efficacy: 116.0 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

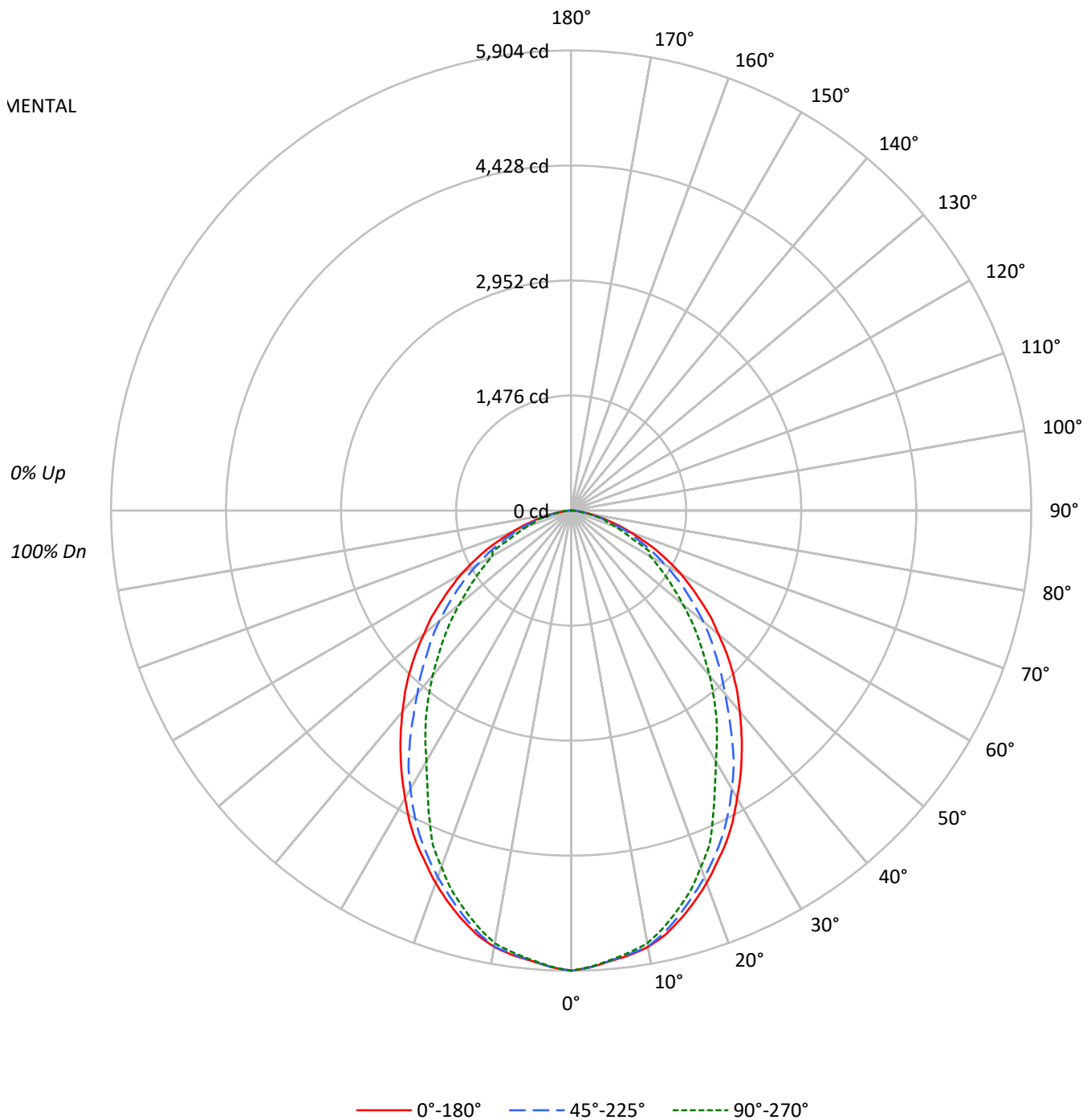
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7944	7944	7944
5°	7836	7826	7817
10°	7768	7758	7702
15°	7558	7482	7377
20°	7281	7163	6968
25°	6981	6829	6404
30°	6617	6405	5768
35°	6267	5919	5336
40°	5910	5394	4855
45°	5571	4987	4390
50°	5157	4629	3915
55°	4771	4195	3506
60°	4371	3747	3141
65°	3846	3281	2781
70°	3168	2873	2363
75°	2519	2200	2306
80°	1692	1587	1481
85°	1054	1264	1476

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5571 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	549.6	4.7
10°-20°	1508.2	13.0
20°-30°	2088.0	18.0
30°-40°	2226.5	19.2
40°-50°	2031.2	17.5
50°-60°	1591.3	13.7
60°-70°	1037.1	8.9
70°-80°	459.5	4.0
80°-90°	98.7	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°	4145.8	35.8
0°-40°	6372.3	55.0
0°-60°	9994.7	86.2
0°-90°	11590.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11590.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5904	5904	5904	5904	5904	
5°	5801	5795	5795	5788	5788	551
15°	5426	5426	5371	5317	5296	1525
25°	4703	4675	4600	4436	4314	2159
35°	3815	3788	3604	3331	3249	2385
45°	2928	2867	2621	2402	2307	2255
55°	2034	1972	1788	1577	1495	1824
65°	1208	1140	1031	1051	874	1191
75°	485	450	423	403	444	519
85°	68	75	82	89	96	95
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5903.8	5903.8	5903.8	5903.8	5903.8
2.5°	5862.8	5862.8	5862.8	5856.0	5856.0
5°	5801.4	5794.6	5794.6	5787.8	5787.8
7.5°	5753.6	5746.8	5740.0	5733.2	5719.5
10°	5685.4	5685.4	5678.6	5644.4	5637.6
12.5°	5576.2	5569.4	5542.1	5494.3	5480.6
15°	5426.0	5426.0	5371.4	5316.8	5296.3
17.5°	5262.2	5255.4	5187.1	5132.5	5105.2
20°	5084.8	5071.1	5002.9	4914.1	4866.4
22.5°	4886.8	4886.8	4804.9	4688.9	4641.1
25°	4702.6	4675.3	4600.2	4436.4	4313.5
27.5°	4491.0	4450.0	4368.1	4136.1	3992.7
30°	4258.9	4238.4	4122.4	3822.1	3712.9
32.5°	4040.5	4006.4	3883.5	3569.6	3480.8
35°	3815.3	3788.0	3603.7	3330.7	3248.8
37.5°	3590.1	3555.9	3323.9	3105.5	3003.1
40°	3364.8	3323.9	3071.3	2873.4	2764.2
42.5°	3153.2	3098.6	2852.9	2641.3	2518.5
45°	2928.0	2866.6	2620.9	2402.5	2306.9
47.5°	2702.8	2648.2	2422.9	2197.7	2088.5
50°	2463.9	2416.1	2211.4	1986.1	1870.1
52.5°	2266.0	2190.9	1993.0	1767.7	1672.2
55°	2033.9	1972.5	1788.2	1576.6	1494.7
57.5°	1822.3	1760.9	1590.3	1392.3	1324.1
60°	1624.4	1535.7	1392.3	1221.7	1167.1
62.5°	1406.0	1337.7	1214.9	1071.6	1139.8
65°	1208.1	1139.8	1030.6	1051.1	873.6
67.5°	989.7	955.5	860.0	764.4	737.1
70°	805.4	764.4	730.3	627.9	600.6
72.5°	641.6	600.6	552.8	498.2	477.8
75°	484.6	450.5	423.2	402.7	443.6
77.5°	334.4	320.8	300.3	279.8	273.0
80°	218.4	211.6	204.8	197.9	191.1
82.5°	129.7	129.7	129.7	129.7	129.7
85°	68.3	75.1	81.9	88.7	95.6
87.5°	41.0	41.0	47.8	54.6	61.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)