

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: P563829

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563829
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-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11296.0 lumens
Efficiency: N/A
Efficacy: 120.7 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

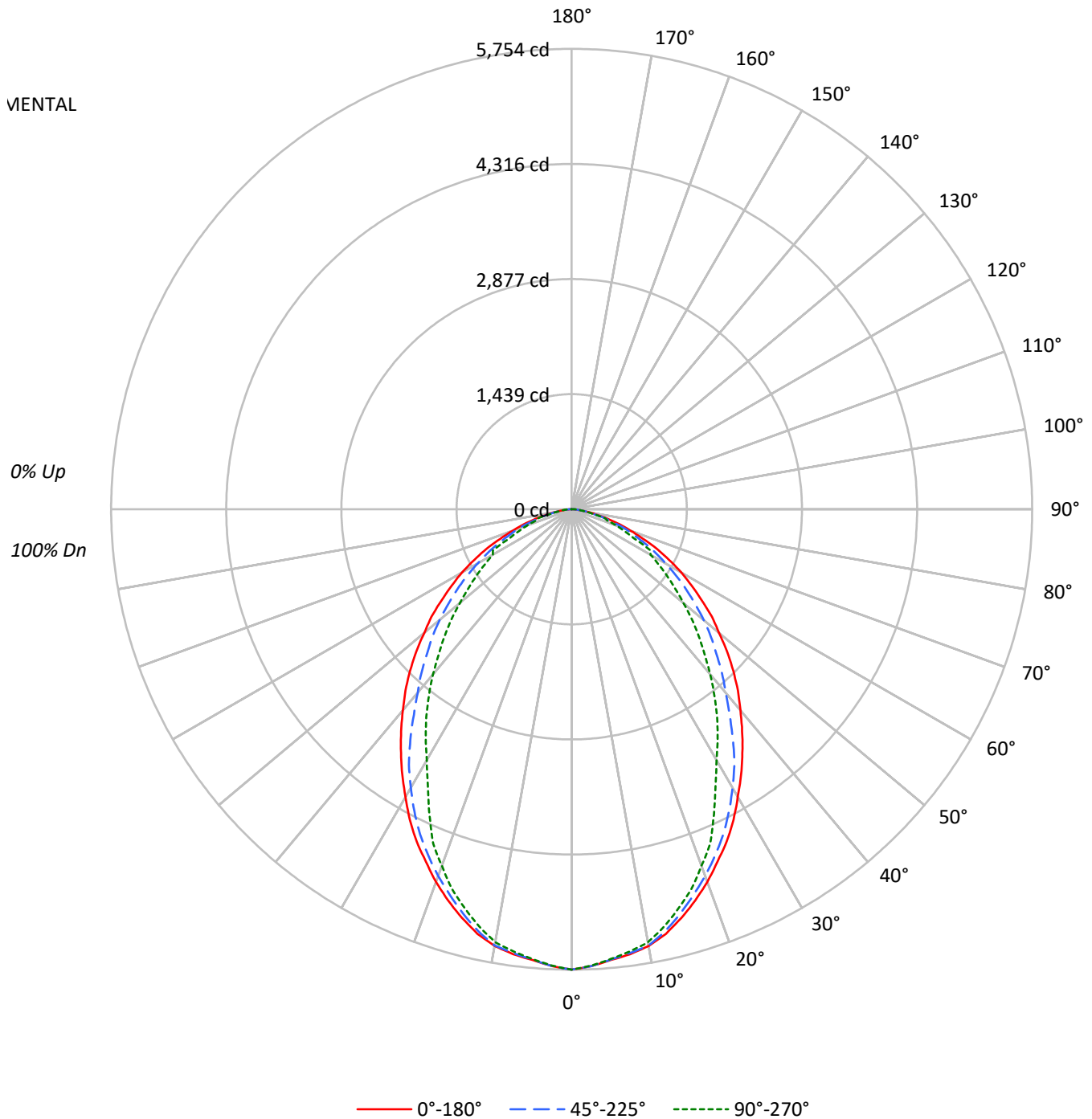
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7742	7742	7742
5°	7637	7628	7619
10°	7571	7561	7507
15°	7366	7292	7190
20°	7096	6982	6791
25°	6804	6656	6241
30°	6449	6242	5622
35°	6108	5769	5201
40°	5760	5258	4732
45°	5430	4861	4278
50°	5027	4511	3815
55°	4650	4088	3417
60°	4260	3652	3061
65°	3748	3198	2711
70°	3088	2800	2303
75°	2455	2144	2248
80°	1650	1547	1444
85°	1027	1232	1437

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5430 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	535.6	4.7
10°-20°	1470.0	13.0
20°-30°	2035.1	18.0
30°-40°	2170.0	19.2
40°-50°	1979.7	17.5
50°-60°	1550.9	13.7
60°-70°	1010.8	8.9
70°-80°	447.8	4.0
80°-90°	96.2	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°	4040.7	35.8
0°-40°	6210.7	55.0
0°-60°	9741.2	86.2
0°-90°	11296.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11296.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5754	5754	5754	5754	5754	
5°	5654	5648	5648	5641	5641	537
15°	5288	5288	5235	5182	5162	1487
25°	4583	4557	4484	4324	4204	2104
35°	3718	3692	3512	3246	3166	2325
45°	2854	2794	2554	2342	2248	2198
55°	1982	1922	1743	1537	1457	1778
65°	1177	1111	1004	1024	852	1160
75°	472	439	412	392	432	506
85°	66	73	80	86	93	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5754.0	5754.0	5754.0	5754.0	5754.0
2.5°	5714.1	5714.1	5714.1	5707.5	5707.5
5°	5654.3	5647.6	5647.6	5640.9	5640.9
7.5°	5607.7	5601.0	5594.4	5587.7	5574.4
10°	5541.2	5541.2	5534.5	5501.3	5494.6
12.5°	5434.7	5428.1	5401.5	5354.9	5341.6
15°	5288.4	5288.4	5235.2	5182.0	5162.0
17.5°	5128.7	5122.1	5055.6	5002.3	4975.7
20°	4955.8	4942.5	4876.0	4789.5	4742.9
22.5°	4762.9	4762.9	4683.0	4570.0	4523.4
25°	4583.3	4556.7	4483.5	4323.8	4204.1
27.5°	4377.1	4337.1	4257.3	4031.1	3891.5
30°	4150.9	4130.9	4017.8	3725.2	3618.7
32.5°	3938.0	3904.8	3785.0	3479.0	3392.6
35°	3718.5	3691.9	3512.3	3246.2	3166.4
37.5°	3499.0	3465.7	3239.6	3026.7	2926.9
40°	3279.5	3239.6	2993.4	2800.5	2694.1
42.5°	3073.3	3020.0	2780.6	2574.3	2454.6
45°	2853.7	2793.9	2554.4	2341.5	2248.4
47.5°	2634.2	2581.0	2361.5	2142.0	2035.5
50°	2401.4	2354.8	2155.3	1935.7	1822.7
52.5°	2208.5	2135.3	1942.4	1722.9	1629.8
55°	1982.3	1922.4	1742.8	1536.6	1456.8
57.5°	1776.1	1716.2	1549.9	1357.0	1290.5
60°	1583.2	1496.7	1357.0	1190.7	1137.5
62.5°	1370.3	1303.8	1184.1	1044.4	1110.9
65°	1177.4	1110.9	1004.5	1024.4	851.5
67.5°	964.5	931.3	838.2	745.0	718.4
70°	784.9	745.0	711.8	612.0	585.4
72.5°	625.3	585.4	538.8	485.6	465.6
75°	472.3	439.0	412.4	392.5	432.4
77.5°	326.0	312.6	292.7	272.7	266.1
80°	212.9	206.2	199.6	192.9	186.3
82.5°	126.4	126.4	126.4	126.4	126.4
85°	66.5	73.2	79.8	86.5	93.1
87.5°	39.9	39.9	46.6	53.2	59.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)