

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: P563079

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-81-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563079
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-LD4-3HI-35-UNV-81-87-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12791.0 lumens
Efficiency: N/A
Efficacy: 98.7 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

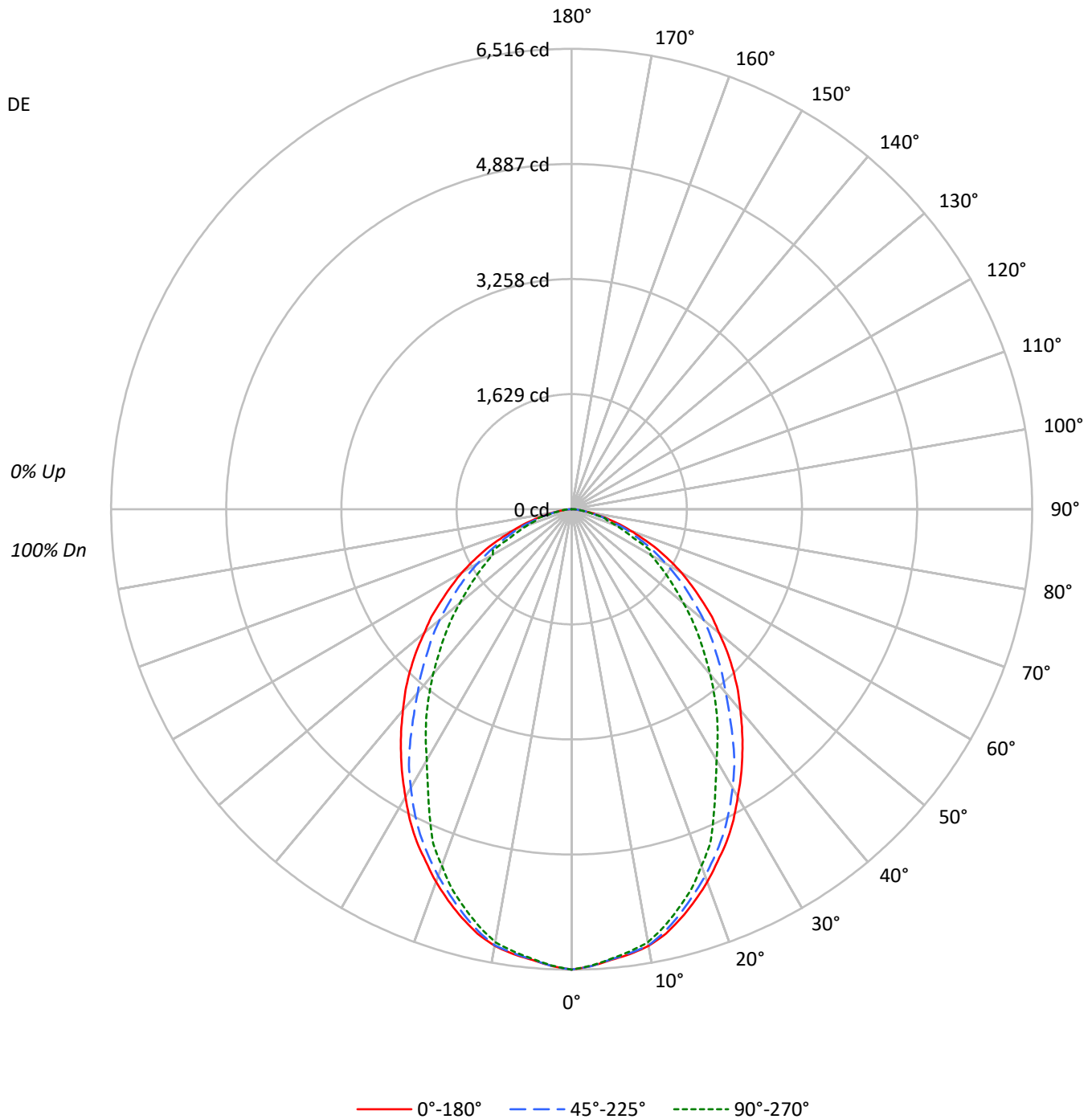
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8767	8767	8767
5°	8648	8637	8627
10°	8573	8562	8501
15°	8341	8257	8142
20°	8035	7906	7690
25°	7705	7537	7067
30°	7302	7068	6366
35°	6916	6533	5889
40°	6522	5954	5358
45°	6149	5504	4845
50°	5692	5108	4320
55°	5266	4629	3870
60°	4824	4135	3466
65°	4245	3621	3070
70°	3496	3171	2608
75°	2780	2428	2545
80°	1867	1751	1634
85°	1162	1396	1629

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6149 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	606.5	4.7
10°-20°	1664.5	13.0
20°-30°	2304.4	18.0
30°-40°	2457.2	19.2
40°-50°	2241.7	17.5
50°-60°	1756.2	13.7
60°-70°	1144.6	8.9
70°-80°	507.1	4.0
80°-90°	108.9	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°	4575.4	35.8
0°-40°	7032.6	55.0
0°-60°	11030.4	86.2
0°-90°	12791.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12791.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6516	6516	6516	6516	6516	
5°	6403	6395	6395	6388	6388	608
15°	5988	5988	5928	5868	5845	1683
25°	5190	5160	5077	4896	4760	2383
35°	4211	4180	3977	3676	3585	2632
45°	3231	3164	2892	2651	2546	2489
55°	2245	2177	1974	1740	1650	2013
65°	1333	1258	1137	1160	964	1314
75°	535	497	467	444	490	573
85°	75	83	90	98	106	104
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6515.6	6515.6	6515.6	6515.6	6515.6
2.5°	6470.4	6470.4	6470.4	6462.8	6462.8
5°	6402.6	6395.0	6395.0	6387.5	6387.5
7.5°	6349.9	6342.3	6334.8	6327.3	6312.2
10°	6274.5	6274.5	6267.0	6229.3	6221.8
12.5°	6154.0	6146.5	6116.3	6063.6	6048.6
15°	5988.3	5988.3	5928.0	5867.8	5845.2
17.5°	5807.5	5800.0	5724.7	5664.4	5634.3
20°	5611.7	5596.6	5521.3	5423.4	5370.6
22.5°	5393.2	5393.2	5302.8	5174.8	5122.1
25°	5189.9	5159.7	5076.9	4896.1	4760.5
27.5°	4956.3	4911.2	4820.8	4564.7	4406.5
30°	4700.2	4677.6	4549.6	4218.2	4097.6
32.5°	4459.2	4421.5	4286.0	3939.5	3841.5
35°	4210.6	4180.5	3977.1	3675.8	3585.4
37.5°	3962.1	3924.4	3668.3	3427.3	3314.3
40°	3713.5	3668.3	3389.6	3171.2	3050.6
42.5°	3480.0	3419.7	3148.6	2915.1	2779.5
45°	3231.4	3163.6	2892.5	2651.4	2546.0
47.5°	2982.8	2922.6	2674.0	2425.4	2304.9
50°	2719.2	2666.5	2440.5	2191.9	2063.9
52.5°	2500.8	2417.9	2199.5	1950.9	1845.4
55°	2244.7	2176.9	1973.5	1740.0	1649.6
57.5°	2011.2	1943.4	1755.1	1536.6	1461.3
60°	1792.7	1694.8	1536.6	1348.3	1288.0
62.5°	1551.7	1476.4	1340.8	1182.6	1257.9
65°	1333.2	1257.9	1137.4	1160.0	964.2
67.5°	1092.2	1054.5	949.1	843.6	813.5
70°	888.8	843.6	806.0	693.0	662.9
72.5°	708.0	662.9	610.1	549.9	527.3
75°	534.8	497.1	467.0	444.4	489.6
77.5°	369.1	354.0	331.4	308.8	301.3
80°	241.0	233.5	226.0	218.4	210.9
82.5°	143.1	143.1	143.1	143.1	143.1
85°	75.3	82.9	90.4	97.9	105.5
87.5°	45.2	45.2	52.7	60.3	67.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)