

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: P563847

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563847
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-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: 10383.0 lumens
Efficiency: N/A
Efficacy: 110.9 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

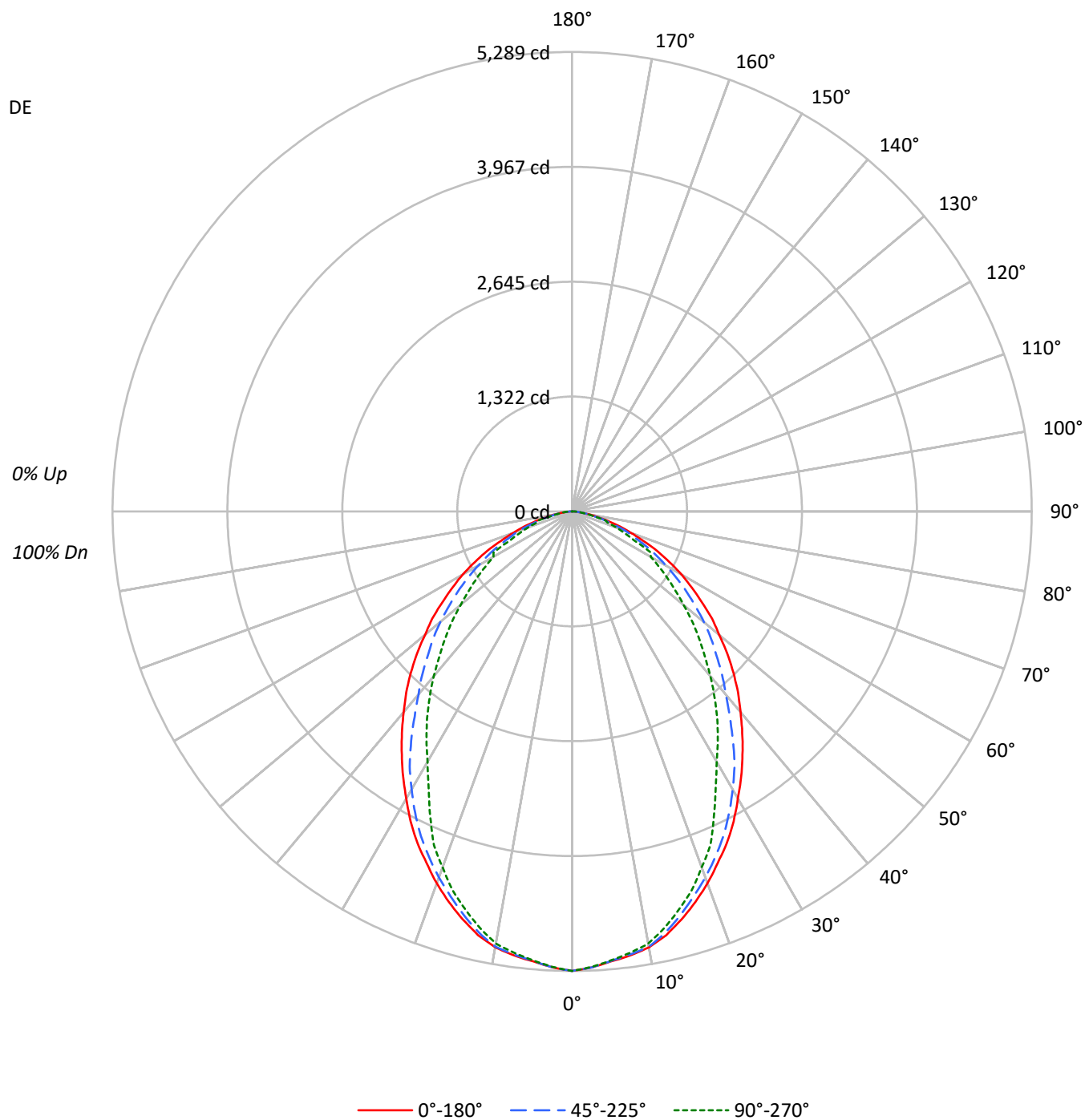
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	7116	7116	7116
5°	7019	7011	7003
10°	6959	6950	6900
15°	6771	6703	6609
20°	6522	6417	6242
25°	6254	6118	5737
30°	5928	5738	5168
35°	5614	5303	4781
40°	5295	4833	4349
45°	4991	4468	3933
50°	4620	4147	3507
55°	4274	3758	3141
60°	3916	3356	2814
65°	3445	2940	2492
70°	2838	2574	2117
75°	2257	1971	2066
80°	1516	1421	1327
85°	943	1133	1321

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4991 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	492.3	4.7
10°-20°	1351.2	13.0
20°-30°	1870.6	18.0
30°-40°	1994.6	19.2
40°-50°	1819.7	17.5
50°-60°	1425.5	13.7
60°-70°	929.1	8.9
70°-80°	411.6	4.0
80°-90°	88.4	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°	3714.1	35.8
0°-40°	5708.7	55.0
0°-60°	8953.9	86.2
0°-90°	10383.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10383.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5289	5289	5289	5289	5289	
5°	5197	5191	5191	5185	5185	493
15°	4861	4861	4812	4763	4745	1367
25°	4213	4188	4121	3974	3864	1934
35°	3418	3394	3228	2984	2910	2137
45°	2623	2568	2348	2152	2067	2021
55°	1822	1767	1602	1412	1339	1634
65°	1082	1021	923	942	783	1067
75°	434	404	379	361	397	465
85°	61	67	73	80	86	85
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5289.0	5289.0	5289.0	5289.0	5289.0
2.5°	5252.3	5252.3	5252.3	5246.2	5246.2
5°	5197.2	5191.1	5191.1	5185.0	5185.0
7.5°	5154.4	5148.3	5142.2	5136.1	5123.9
10°	5093.3	5093.3	5087.2	5056.6	5050.5
12.5°	4995.5	4989.4	4964.9	4922.1	4909.9
15°	4861.0	4861.0	4812.0	4763.1	4744.8
17.5°	4714.2	4708.1	4646.9	4598.0	4573.6
20°	4555.2	4543.0	4481.9	4402.4	4359.6
22.5°	4377.9	4377.9	4304.5	4200.6	4157.8
25°	4212.8	4188.4	4121.1	3974.4	3864.3
27.5°	4023.3	3986.6	3913.2	3705.3	3576.9
30°	3815.4	3797.0	3693.1	3424.1	3326.2
32.5°	3619.7	3589.2	3479.1	3197.8	3118.3
35°	3418.0	3393.5	3228.4	2983.8	2910.5
37.5°	3216.2	3185.6	2977.7	2782.1	2690.3
40°	3014.4	2977.7	2751.5	2574.2	2476.3
42.5°	2824.9	2775.9	2555.8	2366.3	2256.2
45°	2623.1	2568.1	2347.9	2152.3	2066.7
47.5°	2421.3	2372.4	2170.6	1968.8	1871.0
50°	2207.3	2164.5	1981.1	1779.3	1675.3
52.5°	2030.0	1962.7	1785.4	1583.6	1498.0
55°	1822.1	1767.1	1602.0	1412.4	1339.1
57.5°	1632.5	1577.5	1424.7	1247.3	1186.2
60°	1455.2	1375.7	1247.3	1094.5	1045.6
62.5°	1259.6	1198.4	1088.4	960.0	1021.1
65°	1082.2	1021.1	923.3	941.6	782.6
67.5°	886.6	856.0	770.4	684.8	660.4
70°	721.5	684.8	654.2	562.5	538.1
72.5°	574.8	538.1	495.3	446.4	428.0
75°	434.1	403.6	379.1	360.7	397.4
77.5°	299.6	287.4	269.0	250.7	244.6
80°	195.7	189.5	183.4	177.3	171.2
82.5°	116.2	116.2	116.2	116.2	116.2
85°	61.1	67.3	73.4	79.5	85.6
87.5°	36.7	36.7	42.8	48.9	55.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)