

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: P563863

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-82-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563863
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-82-87-EDD
Description: 2X4 FSR TROFFER WITH .187 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: 10164.0 lumens
Efficiency: N/A
Efficacy: 108.6 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

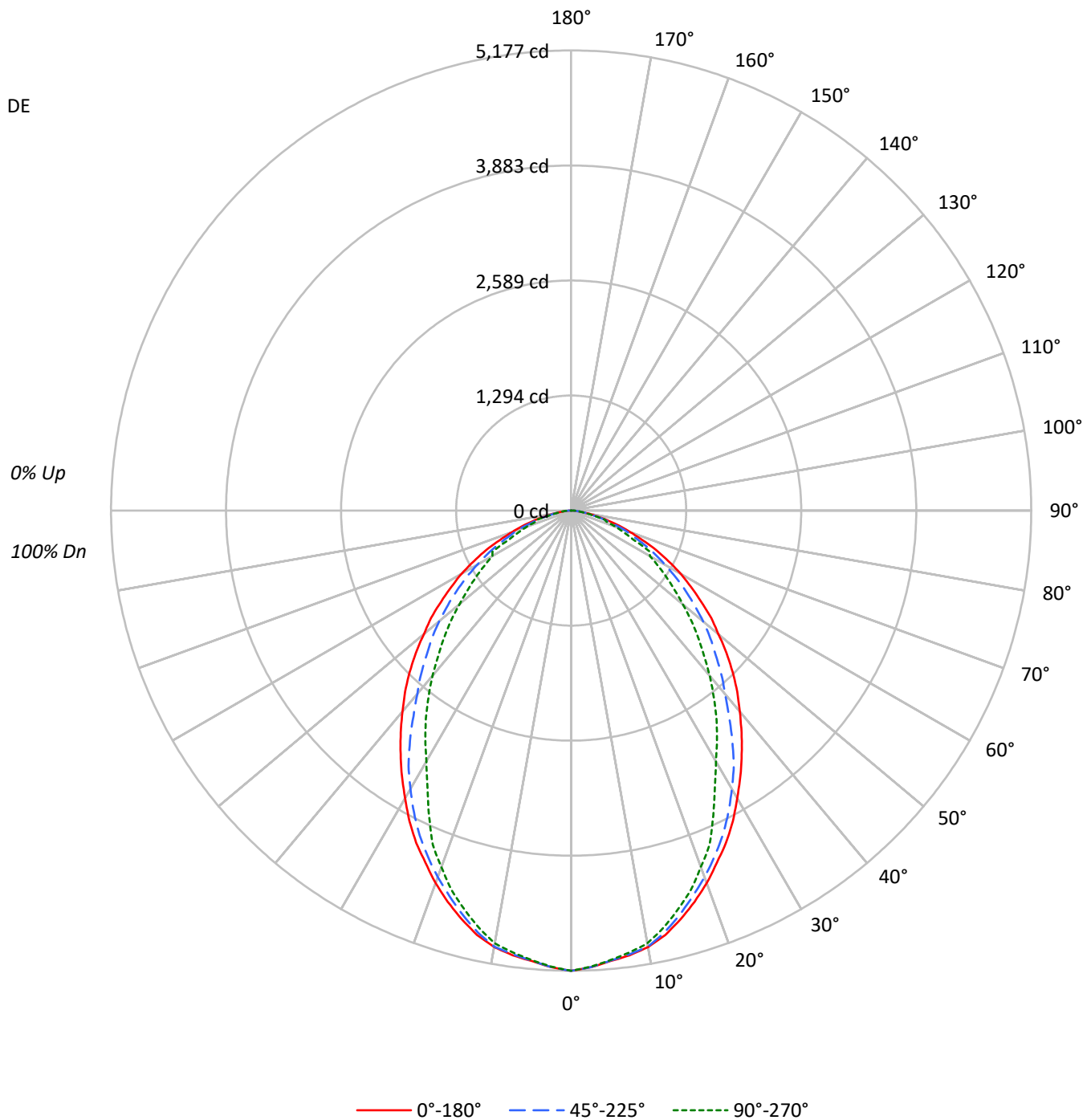
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	
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°	6966	6966	6966
5°	6871	6863	6855
10°	6812	6804	6755
15°	6628	6562	6470
20°	6385	6282	6111
25°	6122	5989	5616
30°	5803	5617	5059
35°	5496	5191	4680
40°	5183	4731	4258
45°	4886	4373	3850
50°	4523	4059	3433
55°	4184	3679	3075
60°	3833	3286	2754
65°	3373	2877	2439
70°	2779	2519	2072
75°	2209	1929	2023
80°	1484	1392	1299
85°	925	1108	1294

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4886 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	481.9	4.7
10°-20°	1322.7	13.0
20°-30°	1831.1	18.0
30°-40°	1952.5	19.2
40°-50°	1781.3	17.5
50°-60°	1395.5	13.7
60°-70°	909.5	8.9
70°-80°	402.9	4.0
80°-90°	86.5	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°	3635.7	35.8
0°-40°	5588.3	55.0
0°-60°	8765.0	86.2
0°-90°	10164.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10164.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5177	5177	5177	5177	5177	
5°	5088	5082	5082	5076	5076	483
15°	4758	4758	4710	4663	4645	1338
25°	4124	4100	4034	3890	3783	1893
35°	3346	3322	3160	2921	2849	2092
45°	2568	2514	2298	2107	2023	1978
55°	1784	1730	1568	1383	1311	1600
65°	1059	1000	904	922	766	1044
75°	425	395	371	353	389	455
85°	60	66	72	78	84	83
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5177.4	5177.4	5177.4	5177.4	5177.4
2.5°	5141.5	5141.5	5141.5	5135.5	5135.5
5°	5087.6	5081.6	5081.6	5075.7	5075.7
7.5°	5045.7	5039.7	5033.8	5027.8	5015.8
10°	4985.9	4985.9	4979.9	4950.0	4944.0
12.5°	4890.1	4884.1	4860.2	4818.3	4806.3
15°	4758.4	4758.4	4710.5	4662.7	4644.7
17.5°	4614.8	4608.8	4548.9	4501.1	4477.1
20°	4459.2	4447.2	4387.3	4309.5	4267.6
22.5°	4285.6	4285.6	4213.7	4112.0	4070.1
25°	4124.0	4100.0	4034.2	3890.5	3782.8
27.5°	3938.4	3902.5	3830.7	3627.2	3501.5
30°	3734.9	3717.0	3615.2	3351.8	3256.1
32.5°	3543.4	3513.5	3405.7	3130.4	3052.6
35°	3345.9	3321.9	3160.3	2920.9	2849.1
37.5°	3148.3	3118.4	2914.9	2723.4	2633.6
40°	2950.8	2914.9	2693.4	2519.9	2424.1
42.5°	2765.3	2717.4	2501.9	2316.4	2208.6
45°	2567.8	2513.9	2298.4	2106.9	2023.1
47.5°	2370.2	2322.4	2124.8	1927.3	1831.5
50°	2160.7	2118.8	1939.3	1741.8	1640.0
52.5°	1987.2	1921.3	1747.7	1550.2	1466.4
55°	1783.7	1729.8	1568.2	1382.6	1310.8
57.5°	1598.1	1544.2	1394.6	1221.0	1161.2
60°	1424.5	1346.7	1221.0	1071.4	1023.5
62.5°	1233.0	1173.1	1065.4	939.7	999.6
65°	1059.4	999.6	903.8	921.8	766.1
67.5°	867.9	838.0	754.2	670.4	646.4
70°	706.3	670.4	640.4	550.7	526.7
72.5°	562.6	526.7	484.8	436.9	419.0
75°	425.0	395.0	371.1	353.1	389.1
77.5°	293.3	281.3	263.4	245.4	239.4
80°	191.5	185.5	179.6	173.6	167.6
82.5°	113.7	113.7	113.7	113.7	113.7
85°	59.9	65.8	71.8	77.8	83.8
87.5°	35.9	35.9	41.9	47.9	53.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)