

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: P563417

Luminaire Tested: FSR-24-4-LD4-3LO-50-UNV-82-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563417
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-LD4-3LO-50-UNV-82-88-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

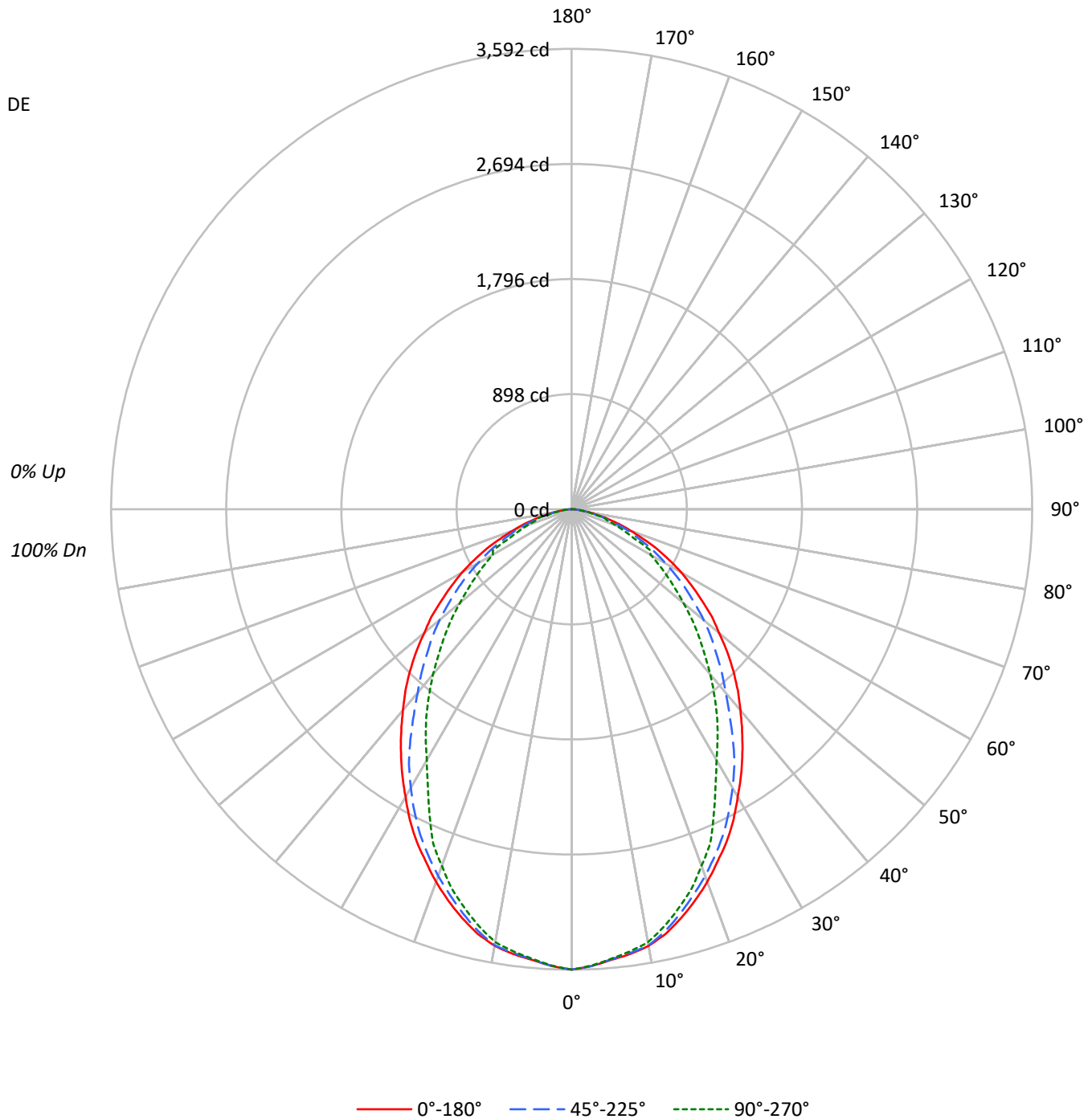
Lumens per Lamp: N/A
Luminaire Lumens: 7051.0 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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	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°	4833	4833	4833
5°	4767	4761	4756
10°	4726	4720	4686
15°	4598	4552	4488
20°	4429	4358	4239
25°	4247	4155	3896
30°	4025	3897	3509
35°	3812	3601	3246
40°	3596	3282	2954
45°	3389	3034	2671
50°	3138	2816	2381
55°	2903	2552	2133
60°	2659	2280	1911
65°	2340	1996	1692
70°	1928	1748	1437
75°	1533	1338	1403
80°	1030	965	901
85°	641	769	897

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3389 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	334.3	4.7
10°-20°	917.6	13.0
20°-30°	1270.3	18.0
30°-40°	1354.5	19.2
40°-50°	1235.7	17.5
50°-60°	968.1	13.7
60°-70°	630.9	8.9
70°-80°	279.5	4.0
80°-90°	60.0	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°	2522.2	35.8
0°-40°	3876.7	55.0
0°-60°	6080.5	86.2
0°-90°	7051.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7051.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3592	3592	3592	3592	3592	
5°	3529	3525	3525	3521	3521	335
15°	3301	3301	3268	3235	3222	928
25°	2861	2844	2799	2699	2624	1313
35°	2321	2304	2192	2026	1976	1451
45°	1781	1744	1594	1462	1404	1372
55°	1237	1200	1088	959	909	1110
65°	735	693	627	639	532	724
75°	295	274	257	245	270	316
85°	42	46	50	54	58	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3591.7	3591.7	3591.7	3591.7	3591.7
2.5°	3566.8	3566.8	3566.8	3562.6	3562.6
5°	3529.4	3525.2	3525.2	3521.1	3521.1
7.5°	3500.3	3496.2	3492.0	3487.9	3479.6
10°	3458.8	3458.8	3454.7	3433.9	3429.7
12.5°	3392.4	3388.2	3371.6	3342.6	3334.2
15°	3301.0	3301.0	3267.8	3234.6	3222.1
17.5°	3201.4	3197.2	3155.7	3122.5	3105.9
20°	3093.4	3085.1	3043.6	2989.6	2960.5
22.5°	2973.0	2973.0	2923.2	2852.6	2823.5
25°	2860.9	2844.3	2798.6	2699.0	2624.2
27.5°	2732.2	2707.3	2657.4	2516.3	2429.1
30°	2591.0	2578.5	2508.0	2325.3	2258.8
32.5°	2458.1	2437.4	2362.6	2171.6	2117.6
35°	2321.1	2304.5	2192.4	2026.3	1976.5
37.5°	2184.1	2163.3	2022.1	1889.3	1827.0
40°	2047.1	2022.1	1868.5	1748.1	1681.7
42.5°	1918.3	1885.1	1735.6	1606.9	1532.2
45°	1781.3	1743.9	1594.5	1461.6	1403.5
47.5°	1644.3	1611.1	1474.0	1337.0	1270.6
50°	1499.0	1469.9	1345.3	1208.3	1137.7
52.5°	1378.5	1332.9	1212.5	1075.4	1017.3
55°	1237.4	1200.0	1087.9	959.2	909.3
57.5°	1108.6	1071.3	967.5	847.1	805.5
60°	988.2	934.3	847.1	743.3	710.0
62.5°	855.4	813.8	739.1	651.9	693.4
65°	734.9	693.4	627.0	639.4	531.5
67.5°	602.1	581.3	523.2	465.1	448.4
70°	490.0	465.1	444.3	382.0	365.4
72.5°	390.3	365.4	336.3	303.1	290.7
75°	294.8	274.0	257.4	245.0	269.9
77.5°	203.5	195.2	182.7	170.2	166.1
80°	132.9	128.7	124.6	120.4	116.3
82.5°	78.9	78.9	78.9	78.9	78.9
85°	41.5	45.7	49.8	54.0	58.1
87.5°	24.9	24.9	29.1	33.2	37.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)