

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: P562643

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-82-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562643
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-LD4-2HI-50-UNV-82-85-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8963.0 lumens
Efficiency: N/A
Efficacy: 103.7 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

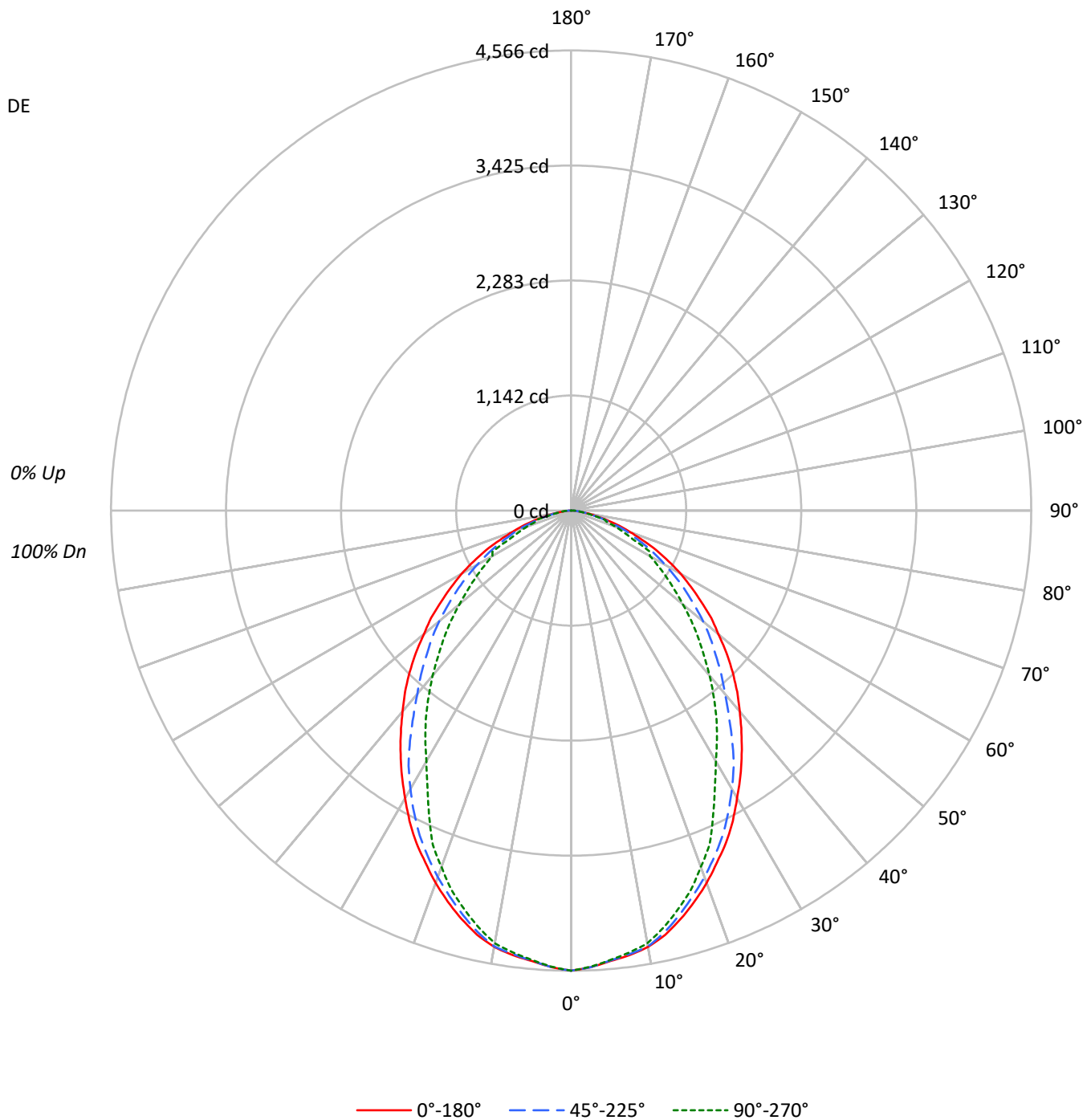
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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°	6143	6143	6143
5°	6060	6052	6045
10°	6007	6000	5957
15°	5845	5786	5705
20°	5630	5540	5388
25°	5399	5281	4952
30°	5117	4953	4461
35°	4846	4578	4127
40°	4570	4172	3755
45°	4309	3857	3395
50°	3988	3580	3027
55°	3690	3244	2711
60°	3380	2898	2429
65°	2974	2537	2151
70°	2450	2222	1827
75°	1948	1701	1784
80°	1309	1227	1145
85°	815	977	1141

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4309 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	425.0	4.7
10°-20°	1166.4	13.0
20°-30°	1614.8	18.0
30°-40°	1721.8	19.2
40°-50°	1570.8	17.5
50°-60°	1230.6	13.7
60°-70°	802.0	8.9
70°-80°	355.3	4.0
80°-90°	76.3	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°	3206.1	35.8
0°-40°	4928.0	55.0
0°-60°	7729.3	86.2
0°-90°	8963.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8963.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4566	4566	4566	4566	4566	
5°	4486	4481	4481	4476	4476	426
15°	4196	4196	4154	4112	4096	1180
25°	3637	3616	3558	3431	3336	1670
35°	2950	2929	2787	2576	2512	1845
45°	2264	2217	2027	1858	1784	1744
55°	1573	1525	1383	1219	1156	1411
65°	934	882	797	813	676	921
75°	375	348	327	311	343	402
85°	53	58	63	69	74	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4565.6	4565.6	4565.6	4565.6	4565.6
2.5°	4534.0	4534.0	4534.0	4528.7	4528.7
5°	4486.5	4481.2	4481.2	4475.9	4475.9
7.5°	4449.5	4444.2	4439.0	4433.7	4423.1
10°	4396.7	4396.7	4391.5	4365.1	4359.8
12.5°	4312.3	4307.0	4285.9	4248.9	4238.4
15°	4196.2	4196.2	4153.9	4111.7	4095.9
17.5°	4069.5	4064.2	4011.4	3969.2	3948.1
20°	3932.2	3921.7	3868.9	3800.3	3763.3
22.5°	3779.2	3779.2	3715.8	3626.1	3589.2
25°	3636.7	3615.6	3557.5	3430.8	3335.8
27.5°	3473.0	3441.4	3378.0	3198.6	3087.7
30°	3293.6	3277.8	3188.0	2955.8	2871.3
32.5°	3124.7	3098.3	3003.3	2760.5	2691.9
35°	2950.5	2929.4	2786.9	2575.8	2512.4
37.5°	2776.3	2749.9	2570.5	2401.6	2322.4
40°	2602.1	2570.5	2375.2	2222.1	2137.7
42.5°	2438.5	2396.3	2206.3	2042.7	1947.7
45°	2264.3	2216.8	2026.8	1857.9	1784.0
47.5°	2090.2	2047.9	1873.8	1699.6	1615.1
50°	1905.4	1868.5	1710.1	1536.0	1446.2
52.5°	1752.4	1694.3	1541.2	1367.1	1293.2
55°	1572.9	1525.4	1382.9	1219.3	1155.9
57.5°	1409.3	1361.8	1229.8	1076.8	1024.0
60°	1256.2	1187.6	1076.8	944.8	902.6
62.5°	1087.3	1034.5	939.5	828.7	881.5
65°	934.2	881.5	797.0	812.8	675.6
67.5°	765.3	738.9	665.1	591.2	570.0
70°	622.8	591.2	564.8	485.6	464.5
72.5°	496.1	464.5	427.5	385.3	369.5
75°	374.8	348.4	327.2	311.4	343.1
77.5°	258.6	248.1	232.2	216.4	211.1
80°	168.9	163.6	158.3	153.1	147.8
82.5°	100.3	100.3	100.3	100.3	100.3
85°	52.8	58.1	63.3	68.6	73.9
87.5°	31.7	31.7	36.9	42.2	47.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)