

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: P563780

Luminaire Tested: FSR-24-4-LD4-4HI-50-UNV-81-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563780
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-LD4-4HI-50-UNV-81-86-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15751.0 lumens
Efficiency: N/A
Efficacy: 91.2 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

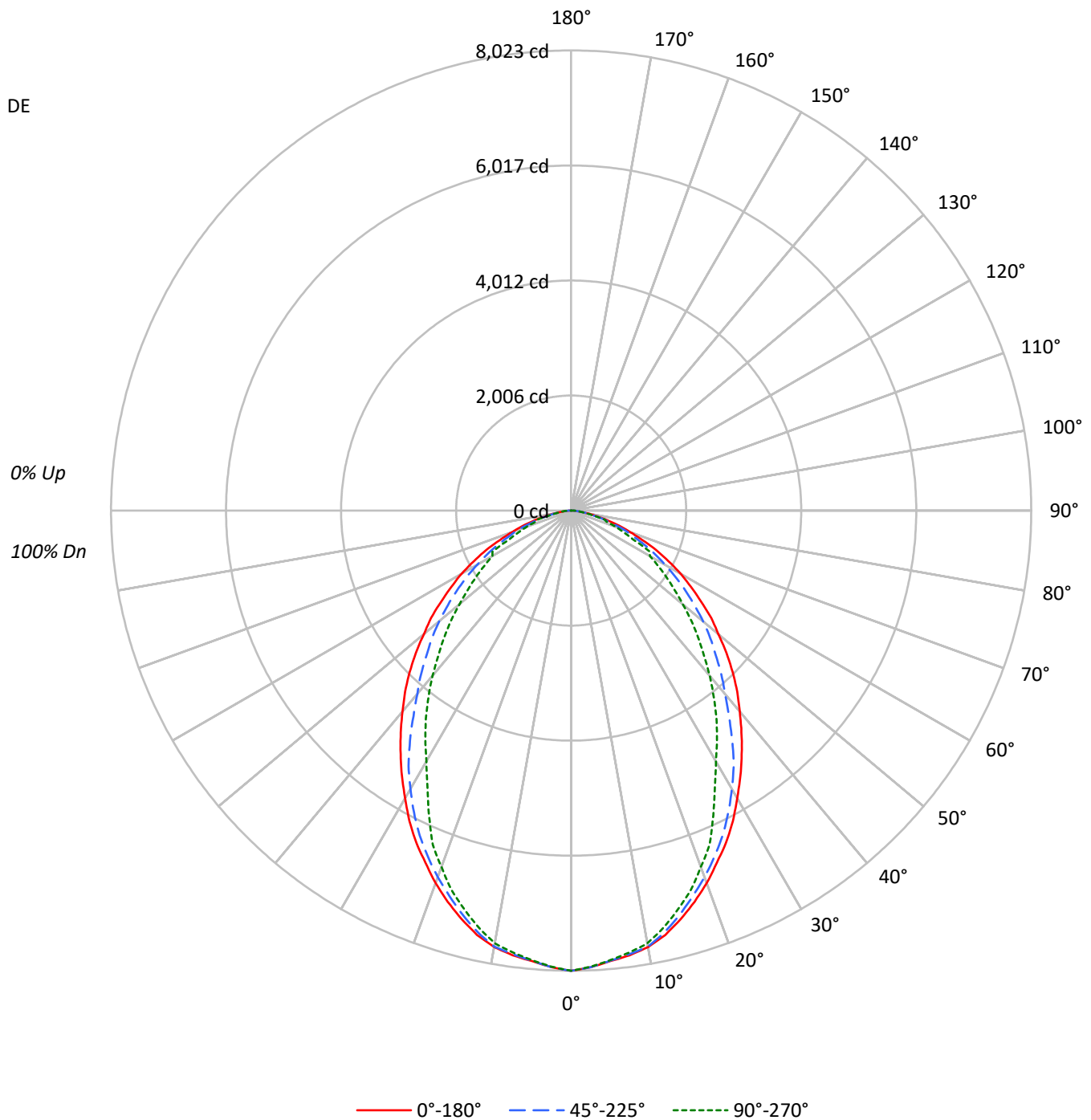
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	10795	10795	10795
5°	10649	10636	10624
10°	10556	10544	10468
15°	10272	10168	10026
20°	9894	9735	9469
25°	9488	9281	8703
30°	8992	8704	7839
35°	8517	8044	7252
40°	8032	7331	6598
45°	7572	6777	5965
50°	7009	6291	5320
55°	6484	5701	4765
60°	5941	5092	4268
65°	5227	4459	3780
70°	4306	3904	3211
75°	3424	2990	3134
80°	2300	2156	2012
85°	1433	1718	2005

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7572 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	746.9	4.7
10°-20°	2049.7	13.0
20°-30°	2837.7	18.0
30°-40°	3025.8	19.2
40°-50°	2760.4	17.5
50°-60°	2162.6	13.7
60°-70°	1409.5	8.9
70°-80°	624.5	4.0
80°-90°	134.1	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°	5634.3	35.8
0°-40°	8660.1	55.0
0°-60°	13583.0	86.2
0°-90°	15751.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15751.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8023	8023	8023	8023	8023	
5°	7884	7875	7875	7866	7866	748
15°	7374	7374	7300	7226	7198	2073
25°	6391	6354	6252	6029	5862	2934
35°	5185	5148	4898	4526	4415	3242
45°	3979	3896	3562	3265	3135	3065
55°	2764	2681	2430	2143	2031	2479
65°	1642	1549	1401	1428	1187	1618
75°	659	612	575	547	603	706
85°	93	102	111	121	130	129
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8023.3	8023.3	8023.3	8023.3	8023.3
2.5°	7967.7	7967.7	7967.7	7958.4	7958.4
5°	7884.2	7874.9	7874.9	7865.7	7865.7
7.5°	7819.3	7810.0	7800.7	7791.5	7772.9
10°	7726.5	7726.5	7717.3	7670.9	7661.6
12.5°	7578.1	7568.8	7531.7	7466.8	7448.3
15°	7374.1	7374.1	7299.9	7225.7	7197.8
17.5°	7151.4	7142.2	7049.4	6975.2	6938.1
20°	6910.3	6891.7	6799.0	6678.4	6613.5
22.5°	6641.3	6641.3	6530.0	6372.3	6307.4
25°	6390.9	6353.8	6251.7	6029.1	5862.1
27.5°	6103.3	6047.7	5936.4	5621.0	5426.2
30°	5787.9	5760.1	5602.4	5194.3	5045.9
32.5°	5491.1	5444.7	5277.8	4851.1	4730.5
35°	5185.0	5147.9	4897.5	4526.5	4415.2
37.5°	4878.9	4832.6	4517.2	4220.4	4081.2
40°	4572.8	4517.2	4174.0	3905.0	3756.6
42.5°	4285.3	4211.1	3877.2	3589.6	3422.7
45°	3979.2	3895.7	3561.8	3265.0	3135.1
47.5°	3673.1	3598.9	3292.8	2986.7	2838.3
50°	3348.5	3283.5	3005.3	2699.2	2541.5
52.5°	3079.5	2977.5	2708.5	2402.4	2272.5
55°	2764.1	2680.6	2430.2	2142.7	2031.3
57.5°	2476.6	2393.1	2161.2	1892.2	1799.5
60°	2207.6	2087.0	1892.2	1660.3	1586.1
62.5°	1910.8	1818.0	1651.0	1456.3	1549.0
65°	1641.8	1549.0	1400.6	1428.4	1187.3
67.5°	1345.0	1298.6	1168.7	1038.9	1001.8
70°	1094.5	1038.9	992.5	853.4	816.2
72.5°	871.9	816.2	751.3	677.1	649.3
75°	658.6	612.2	575.1	547.3	602.9
77.5°	454.5	436.0	408.1	380.3	371.0
80°	296.8	287.5	278.3	269.0	259.7
82.5°	176.2	176.2	176.2	176.2	176.2
85°	92.8	102.0	111.3	120.6	129.9
87.5°	55.7	55.7	64.9	74.2	83.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)