

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: P563729

Luminaire Tested: FSR-24-4-LD4-4HI-40-UNV-82-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563729
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-40-UNV-82-84-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17984.0 lumens
Efficiency: N/A
Efficacy: 104.1 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

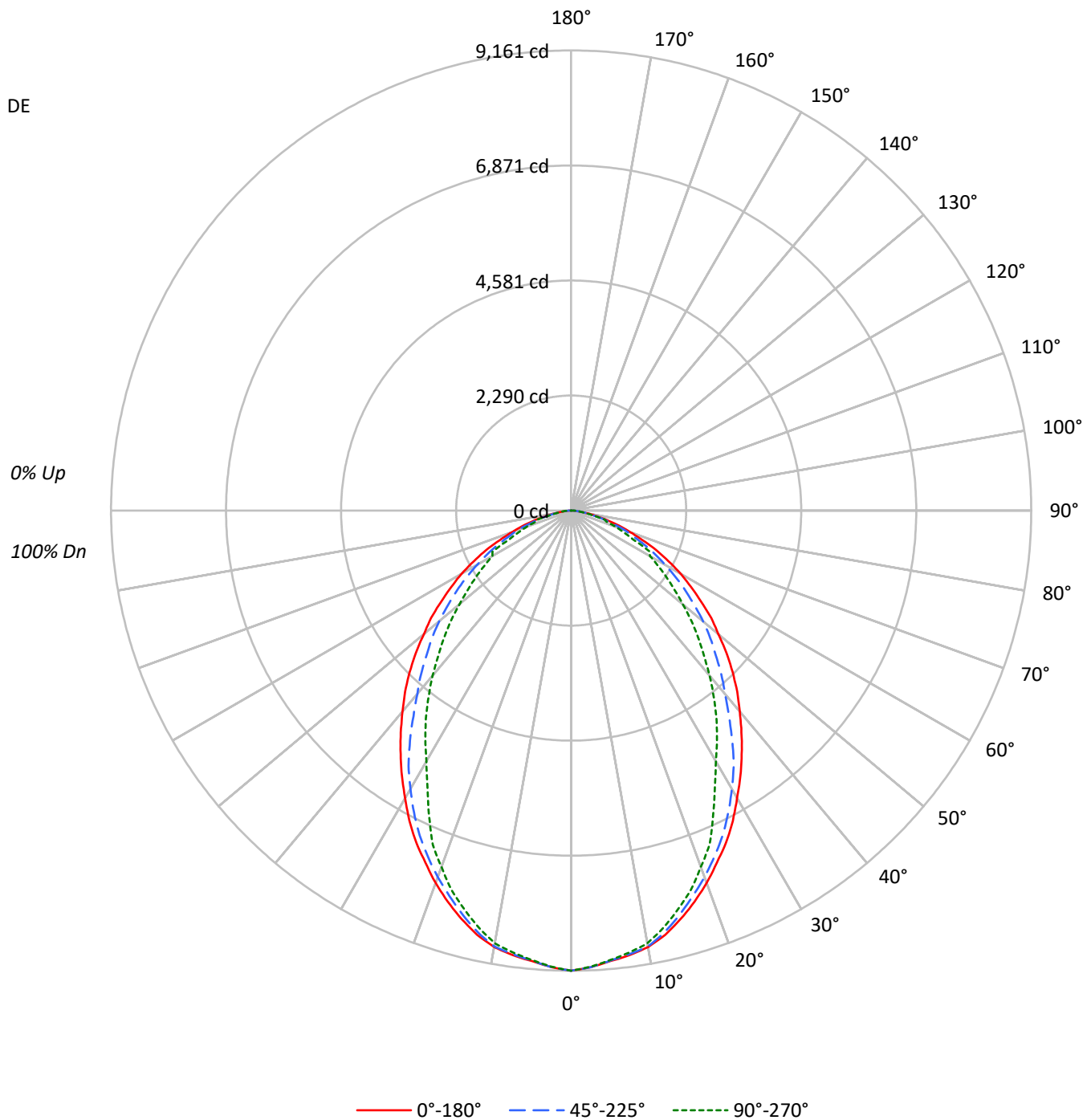
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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																												
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°	12326	12326	12326
5°	12158	12144	12130
10°	12053	12038	11952
15°	11728	11610	11448
20°	11297	11115	10812
25°	10833	10597	9937
30°	10267	9938	8951
35°	9724	9185	8280
40°	9170	8371	7534
45°	8645	7738	6811
50°	8003	7182	6074
55°	7403	6509	5441
60°	6783	5814	4873
65°	5968	5091	4316
70°	4916	4458	3666
75°	3909	3413	3579
80°	2626	2462	2297
85°	1635	1962	2289

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8645 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	852.7	4.7
10°-20°	2340.3	13.0
20°-30°	3240.0	18.0
30°-40°	3454.8	19.2
40°-50°	3151.7	17.5
50°-60°	2469.1	13.7
60°-70°	1609.3	8.9
70°-80°	713.0	4.0
80°-90°	153.1	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°	6433.0	35.8
0°-40°	9887.8	55.0
0°-60°	15508.7	86.2
0°-90°	17984.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17984.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9161	9161	9161	9161	9161	
5°	9002	8991	8991	8981	8981	854
15°	8420	8420	8335	8250	8218	2367
25°	7297	7254	7138	6884	6693	3350
35°	5920	5878	5592	5168	5041	3701
45°	4543	4448	4067	3728	3580	3500
55°	3156	3061	2775	2446	2319	2831
65°	1874	1769	1599	1631	1356	1847
75°	752	699	657	625	688	806
85°	106	116	127	138	148	147
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9160.8	9160.8	9160.8	9160.8	9160.8
2.5°	9097.3	9097.3	9097.3	9086.7	9086.7
5°	9002.0	8991.4	8991.4	8980.8	8980.8
7.5°	8927.8	8917.2	8906.6	8896.0	8874.9
10°	8821.9	8821.9	8811.3	8758.4	8747.8
12.5°	8652.5	8641.9	8599.5	8525.4	8504.2
15°	8419.5	8419.5	8334.7	8250.0	8218.3
17.5°	8165.3	8154.7	8048.8	7964.1	7921.7
20°	7889.9	7868.8	7762.9	7625.2	7551.0
22.5°	7582.8	7582.8	7455.7	7275.7	7201.6
25°	7296.9	7254.5	7138.0	6883.8	6693.2
27.5°	6968.6	6905.0	6777.9	6417.9	6195.5
30°	6608.5	6576.7	6396.7	5930.7	5761.2
32.5°	6269.6	6216.6	6026.0	5538.8	5401.2
35°	5920.1	5877.7	5591.8	5168.2	5041.1
37.5°	5570.6	5517.7	5157.6	4818.7	4659.8
40°	5221.1	5157.6	4765.7	4458.6	4289.2
42.5°	4892.8	4808.1	4426.8	4098.5	3907.9
45°	4543.3	4448.0	4066.8	3727.9	3579.6
47.5°	4193.9	4109.1	3759.6	3410.2	3240.7
50°	3823.2	3749.0	3431.3	3081.8	2901.8
52.5°	3516.1	3399.6	3092.4	2742.9	2594.7
55°	3156.0	3060.7	2774.7	2446.4	2319.3
57.5°	2827.7	2732.4	2467.6	2160.5	2054.6
60°	2520.5	2382.9	2160.5	1895.7	1811.0
62.5°	2181.6	2075.7	1885.1	1662.7	1768.6
65°	1874.5	1768.6	1599.2	1630.9	1355.6
67.5°	1535.6	1482.7	1334.4	1186.1	1143.8
70°	1249.7	1186.1	1133.2	974.3	932.0
72.5°	995.5	932.0	857.8	773.1	741.3
75°	751.9	699.0	656.6	624.8	688.4
77.5°	518.9	497.8	466.0	434.2	423.6
80°	338.9	328.3	317.7	307.1	296.5
82.5°	201.2	201.2	201.2	201.2	201.2
85°	105.9	116.5	127.1	137.7	148.3
87.5°	63.5	63.5	74.1	84.7	95.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)