

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: P563784

Luminaire Tested: FSR-24-4-LD4-4HI-50-UNV-81-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563784
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-81-88-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13724.0 lumens
Efficiency: N/A
Efficacy: 79.4 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

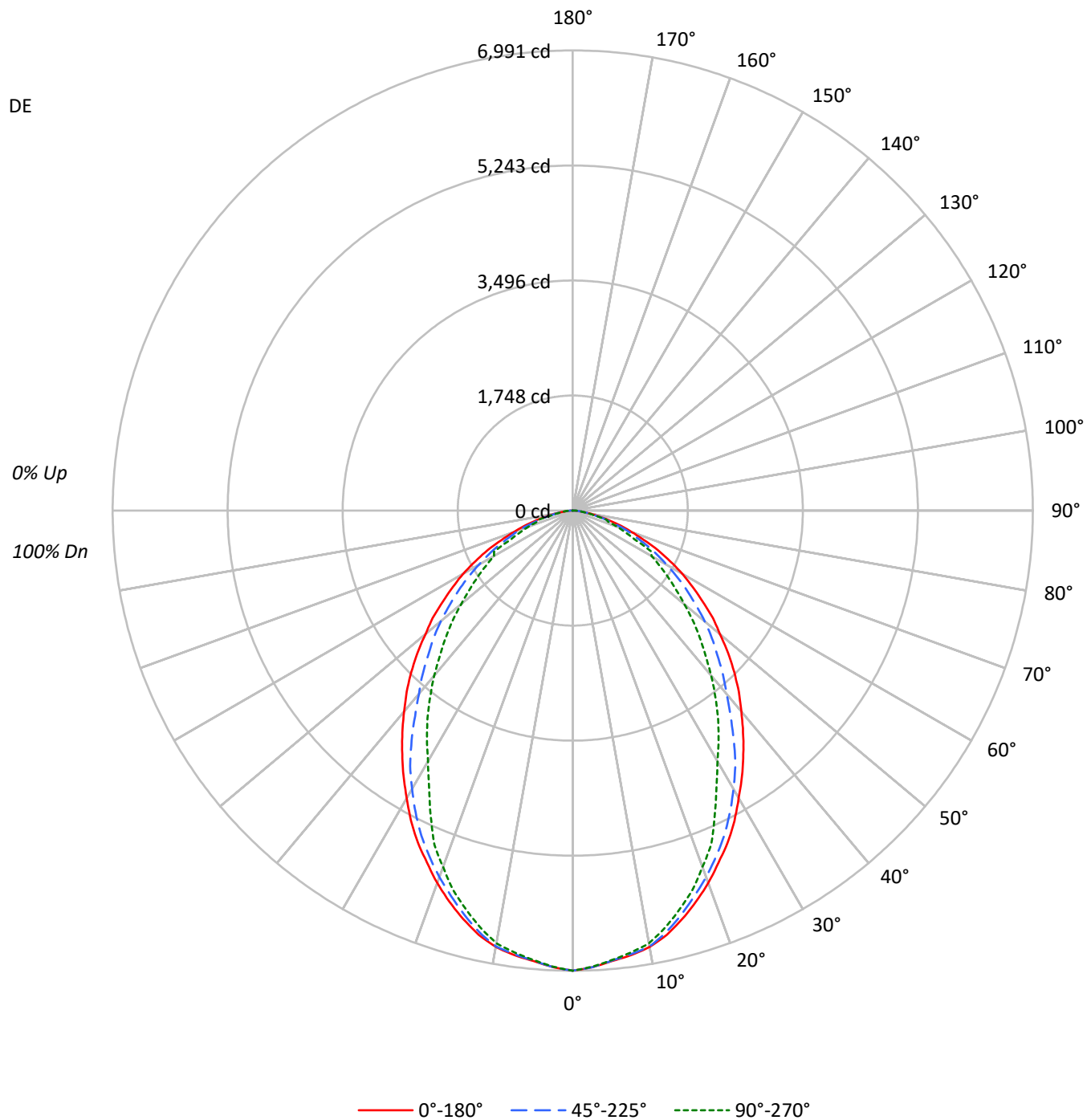
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	99	108	104	100	97	100	97	94		96	94	91		92
2	101	94	88	83	99	92	87	82	89	84	80		86	82	78		83
3	93	84	77	71	91	82	76	70	79	74	69		77	72	68		74
4	86	75	67	61	84	74	66	61	72	65	60		69	64	59		67
5	80	68	60	54	78	67	59	53	65	58	53		63	57	52		61
6	74	62	53	48	72	61	53	47	59	52	47		57	51	47		56
7	69	56	48	43	67	56	48	42	54	47	42		53	46	42		51
8	65	52	44	38	63	51	44	38	50	43	38		49	42	38		48
9	61	48	40	35	59	47	40	35	46	39	35		45	39	34		44
10	57	44	37	32	56	44	37	32	43	36	32		42	36	32		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9406	9406	9406
5°	9278	9267	9256
10°	9198	9187	9121
15°	8950	8860	8736
20°	8621	8482	8251
25°	8267	8087	7583
30°	7835	7584	6831
35°	7421	7009	6319
40°	6998	6388	5749
45°	6597	5905	5198
50°	6107	5481	4635
55°	5650	4967	4152
60°	5176	4437	3719
65°	4554	3885	3294
70°	3752	3402	2798
75°	2983	2605	2731
80°	2004	1879	1753
85°	1247	1497	1746

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6597 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	650.8	4.7
10°-20°	1785.9	13.0
20°-30°	2472.5	18.0
30°-40°	2636.4	19.2
40°-50°	2405.2	17.5
50°-60°	1884.3	13.7
60°-70°	1228.1	8.9
70°-80°	544.1	4.0
80°-90°	116.8	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°	4909.2	35.8
0°-40°	7545.6	55.0
0°-60°	11835.0	86.2
0°-90°	13724.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13724.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6991	6991	6991	6991	6991	
5°	6870	6862	6862	6853	6853	652
15°	6425	6425	6360	6296	6272	1806
25°	5568	5536	5447	5253	5108	2556
35°	4518	4485	4267	3944	3847	2824
45°	3467	3394	3103	2845	2732	2671
55°	2408	2336	2118	1867	1770	2160
65°	1430	1350	1220	1245	1034	1410
75°	574	533	501	477	525	615
85°	81	89	97	105	113	112
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6990.8	6990.8	6990.8	6990.8	6990.8
2.5°	6942.3	6942.3	6942.3	6934.2	6934.2
5°	6869.6	6861.5	6861.5	6853.4	6853.4
7.5°	6813.0	6804.9	6796.9	6788.8	6772.6
10°	6732.2	6732.2	6724.1	6683.7	6675.6
12.5°	6602.9	6594.8	6562.5	6505.9	6489.7
15°	6425.1	6425.1	6360.4	6295.8	6271.5
17.5°	6231.1	6223.0	6142.2	6077.6	6045.2
20°	6021.0	6004.8	5924.0	5819.0	5762.4
22.5°	5786.6	5786.6	5689.6	5552.2	5495.7
25°	5568.4	5536.1	5447.2	5253.2	5107.7
27.5°	5317.9	5269.4	5172.4	4897.6	4727.9
30°	5043.1	5018.8	4881.5	4525.9	4396.5
32.5°	4784.5	4744.1	4598.6	4226.8	4121.8
35°	4517.8	4485.4	4267.2	3944.0	3847.0
37.5°	4251.1	4210.7	3935.9	3677.3	3556.0
40°	3984.4	3935.9	3636.8	3402.5	3273.2
42.5°	3733.8	3669.2	3378.2	3127.7	2982.2
45°	3467.1	3394.4	3103.4	2844.8	2731.7
47.5°	3200.4	3135.8	2869.1	2602.4	2473.1
50°	2917.6	2861.0	2618.5	2351.8	2214.4
52.5°	2683.2	2594.3	2359.9	2093.2	1980.1
55°	2408.4	2335.7	2117.5	1866.9	1769.9
57.5°	2157.9	2085.1	1883.1	1648.7	1567.9
60°	1923.5	1818.4	1648.7	1446.7	1382.0
62.5°	1664.9	1584.0	1438.6	1268.9	1349.7
65°	1430.5	1349.7	1220.4	1244.6	1034.5
67.5°	1171.9	1131.5	1018.3	905.2	872.8
70°	953.7	905.2	864.8	743.5	711.2
72.5°	759.7	711.2	654.6	590.0	565.7
75°	573.8	533.4	501.1	476.8	525.3
77.5°	396.0	379.8	355.6	331.4	323.3
80°	258.6	250.5	242.5	234.4	226.3
82.5°	153.6	153.6	153.6	153.6	153.6
85°	80.8	88.9	97.0	105.1	113.1
87.5°	48.5	48.5	56.6	64.7	72.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)