

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: P564023

Luminaire Tested: FSR-24-4-LD4-4STD-35-UNV-80-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564023
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-LD4-4STD-35-UNV-80-87-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14636.0 lumens
Efficiency: N/A
Efficacy: 109.9 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

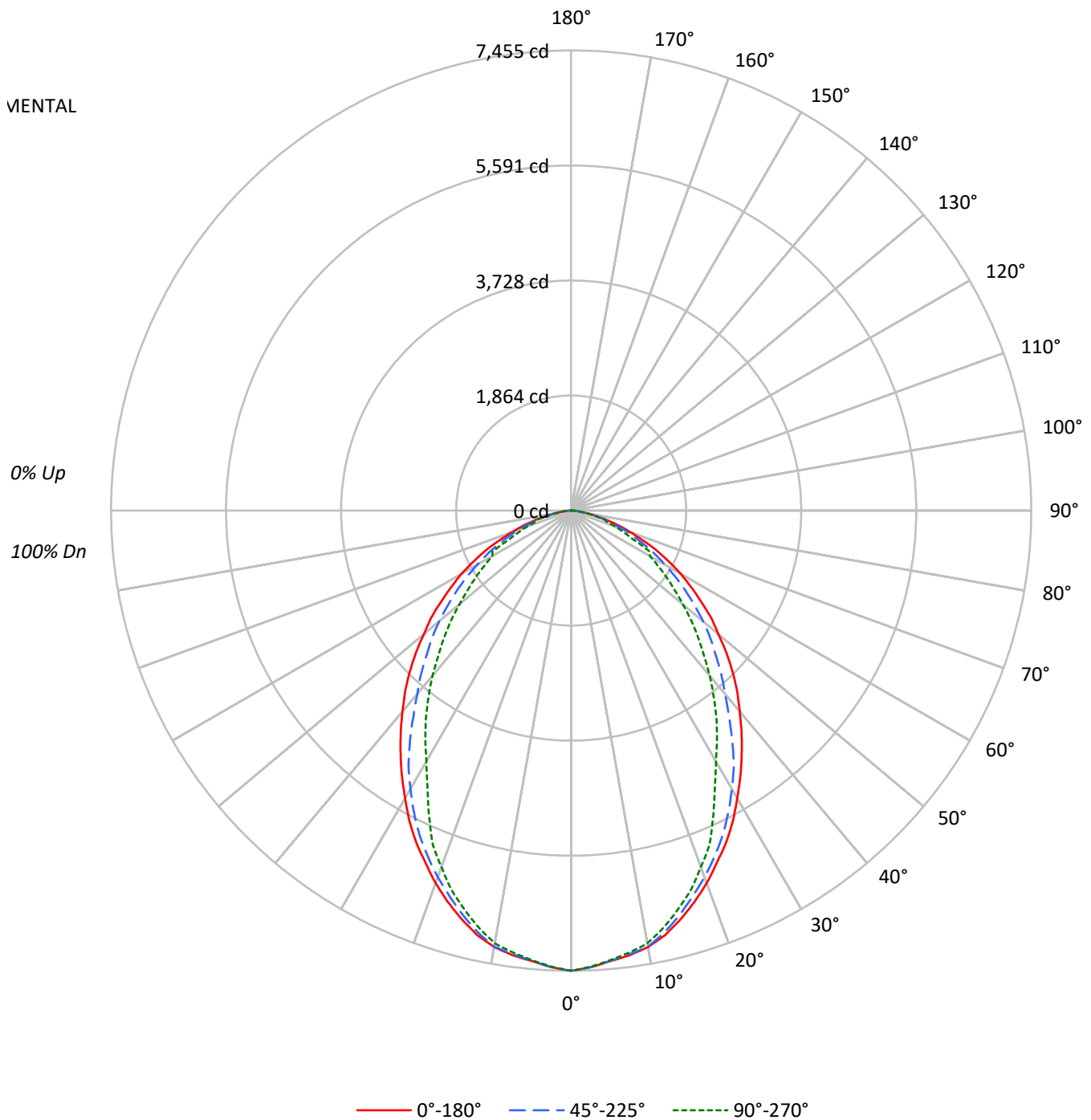
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	10031	10031	10031
5°	9895	9883	9872
10°	9809	9797	9727
15°	9545	9449	9316
20°	9194	9046	8799
25°	8816	8624	8087
30°	8356	8088	7285
35°	7914	7475	6739
40°	7463	6812	6131
45°	7036	6298	5543
50°	6513	5845	4943
55°	6025	5297	4428
60°	5520	4732	3966
65°	4857	4144	3512
70°	4001	3628	2984
75°	3181	2778	2912
80°	2137	2004	1870
85°	1331	1596	1863

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7036 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	694.0	4.7
10°-20°	1904.6	13.0
20°-30°	2636.8	18.0
30°-40°	2811.6	19.2
40°-50°	2565.0	17.5
50°-60°	2009.5	13.7
60°-70°	1309.7	8.9
70°-80°	580.2	4.0
80°-90°	124.6	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°	5235.4	35.8
0°-40°	8047.0	55.0
0°-60°	12621.5	86.2
0°-90°	14636.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14636.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7455	7455	7455	7455	7455	
5°	7326	7318	7318	7309	7309	695
15°	6852	6852	6783	6714	6688	1926
25°	5938	5904	5809	5602	5447	2726
35°	4818	4784	4551	4206	4103	3012
45°	3698	3620	3310	3034	2913	2848
55°	2568	2491	2258	1991	1888	2304
65°	1526	1439	1302	1327	1103	1503
75°	612	569	534	508	560	656
85°	86	95	103	112	121	120
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7455.4	7455.4	7455.4	7455.4	7455.4
2.5°	7403.7	7403.7	7403.7	7395.1	7395.1
5°	7326.1	7317.5	7317.5	7308.9	7308.9
7.5°	7265.8	7257.1	7248.5	7239.9	7222.7
10°	7179.6	7179.6	7171.0	7127.9	7119.2
12.5°	7041.7	7033.1	6998.6	6938.2	6921.0
15°	6852.1	6852.1	6783.1	6714.2	6688.3
17.5°	6645.2	6636.6	6550.4	6481.4	6447.0
20°	6421.1	6403.9	6317.7	6205.6	6145.3
22.5°	6171.2	6171.2	6067.7	5921.2	5860.9
25°	5938.4	5904.0	5809.2	5602.3	5447.2
27.5°	5671.3	5619.5	5516.1	5223.1	5042.1
30°	5378.2	5352.4	5205.8	4826.6	4688.7
32.5°	5102.4	5059.3	4904.2	4507.7	4395.7
35°	4818.0	4783.5	4550.8	4206.0	4102.6
37.5°	4533.6	4490.5	4197.4	3921.6	3792.3
40°	4249.1	4197.4	3878.5	3628.6	3490.7
42.5°	3982.0	3913.0	3602.7	3335.5	3180.4
45°	3697.5	3620.0	3309.7	3033.9	2913.2
47.5°	3413.1	3344.1	3059.7	2775.3	2637.4
50°	3111.4	3051.1	2792.5	2508.1	2361.6
52.5°	2861.5	2766.7	2516.7	2232.3	2111.6
55°	2568.4	2490.9	2258.2	1991.0	1887.5
57.5°	2301.3	2223.7	2008.2	1758.3	1672.1
60°	2051.3	1939.3	1758.3	1542.8	1473.8
62.5°	1775.5	1689.3	1534.2	1353.2	1439.4
65°	1525.6	1439.4	1301.5	1327.3	1103.2
67.5°	1249.7	1206.7	1086.0	965.3	930.8
70°	1017.0	965.3	922.2	792.9	758.5
72.5°	810.2	758.5	698.1	629.2	603.3
75°	611.9	568.9	534.4	508.5	560.2
77.5°	422.3	405.1	379.2	353.4	344.8
80°	275.8	267.2	258.6	249.9	241.3
82.5°	163.8	163.8	163.8	163.8	163.8
85°	86.2	94.8	103.4	112.0	120.7
87.5°	51.7	51.7	60.3	69.0	77.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)