

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: P562485

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562485
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-35-UNV-80-86-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9277.0 lumens
Efficiency: N/A
Efficacy: 107.4 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

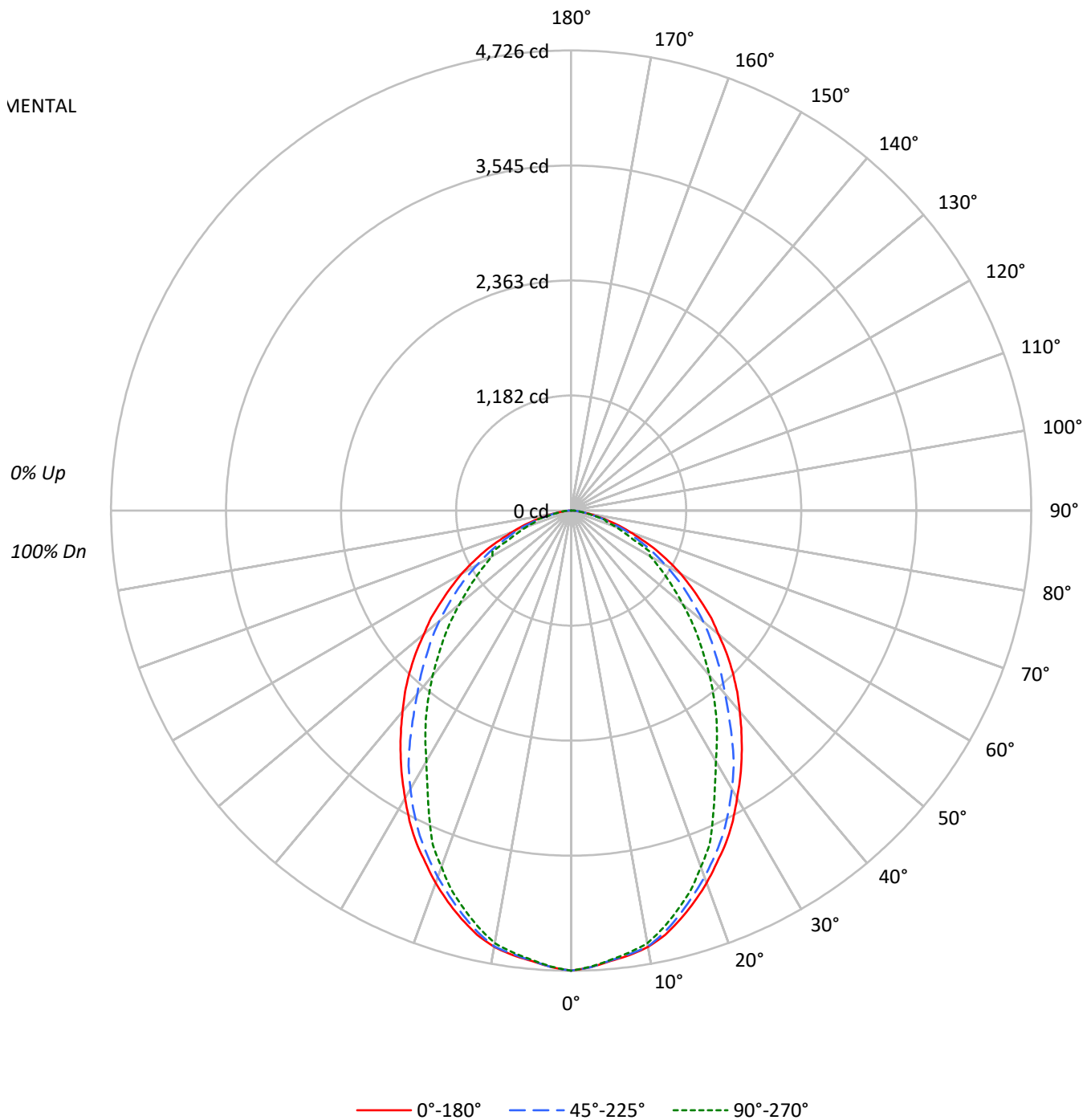
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6358	6358	6358
5°	6272	6264	6257
10°	6218	6210	6165
15°	6050	5989	5905
20°	5828	5734	5577
25°	5588	5466	5126
30°	5296	5127	4617
35°	5016	4738	4271
40°	4731	4318	3886
45°	4460	3992	3514
50°	4128	3705	3133
55°	3819	3358	2807
60°	3499	2999	2514
65°	3079	2626	2226
70°	2536	2300	1891
75°	2017	1761	1846
80°	1354	1270	1185
85°	843	1013	1181

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4460 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	439.9	4.7
10°-20°	1207.2	13.0
20°-30°	1671.3	18.0
30°-40°	1782.1	19.2
40°-50°	1625.8	17.5
50°-60°	1273.7	13.7
60°-70°	830.1	8.9
70°-80°	367.8	4.0
80°-90°	79.0	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°	3318.5	35.8
0°-40°	5100.6	55.0
0°-60°	8000.1	86.2
0°-90°	9277.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9277.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4726	4726	4726	4726	4726	
5°	4644	4638	4638	4633	4633	441
15°	4343	4343	4300	4256	4239	1221
25°	3764	3742	3682	3551	3453	1728
35°	3054	3032	2884	2666	2600	1909
45°	2344	2294	2098	1923	1846	1805
55°	1628	1579	1431	1262	1196	1460
65°	967	912	825	841	699	953
75°	388	361	339	322	355	416
85°	55	60	66	71	76	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4725.6	4725.6	4725.6	4725.6	4725.6
2.5°	4692.8	4692.8	4692.8	4687.3	4687.3
5°	4643.6	4638.2	4638.2	4632.7	4632.7
7.5°	4605.4	4599.9	4594.5	4589.0	4578.1
10°	4550.8	4550.8	4545.3	4518.0	4512.5
12.5°	4463.4	4457.9	4436.0	4397.8	4386.9
15°	4343.2	4343.2	4299.5	4255.8	4239.4
17.5°	4212.0	4206.6	4152.0	4108.2	4086.4
20°	4070.0	4059.1	4004.5	3933.4	3895.2
22.5°	3911.6	3911.6	3846.0	3753.1	3714.9
25°	3764.1	3742.2	3682.1	3551.0	3452.7
27.5°	3594.7	3561.9	3496.4	3310.6	3195.9
30°	3409.0	3392.6	3299.7	3059.3	2971.9
32.5°	3234.2	3206.8	3108.5	2857.2	2786.2
35°	3053.9	3032.0	2884.5	2666.0	2600.4
37.5°	2873.6	2846.3	2660.5	2485.7	2403.8
40°	2693.3	2660.5	2458.4	2300.0	2212.6
42.5°	2524.0	2480.2	2283.6	2114.2	2015.9
45°	2343.7	2294.5	2097.8	1923.0	1846.5
47.5°	2163.4	2119.7	1939.4	1759.1	1671.7
50°	1972.2	1933.9	1770.0	1589.8	1496.9
52.5°	1813.7	1753.7	1595.2	1414.9	1338.5
55°	1628.0	1578.8	1431.3	1262.0	1196.4
57.5°	1458.6	1409.5	1272.9	1114.5	1059.8
60°	1300.2	1229.2	1114.5	977.9	934.2
62.5°	1125.4	1070.8	972.4	857.7	912.3
65°	967.0	912.3	824.9	841.3	699.3
67.5°	792.1	764.8	688.4	611.9	590.0
70°	644.6	611.9	584.6	502.6	480.8
72.5°	513.5	480.8	442.5	398.8	382.4
75°	387.9	360.6	338.7	322.3	355.1
77.5°	267.7	256.8	240.4	224.0	218.5
80°	174.8	169.4	163.9	158.4	153.0
82.5°	103.8	103.8	103.8	103.8	103.8
85°	54.6	60.1	65.6	71.0	76.5
87.5°	32.8	32.8	38.2	43.7	49.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)