

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: P562489

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-80-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562489
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-80-88-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8083.0 lumens
Efficiency: N/A
Efficacy: 93.6 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

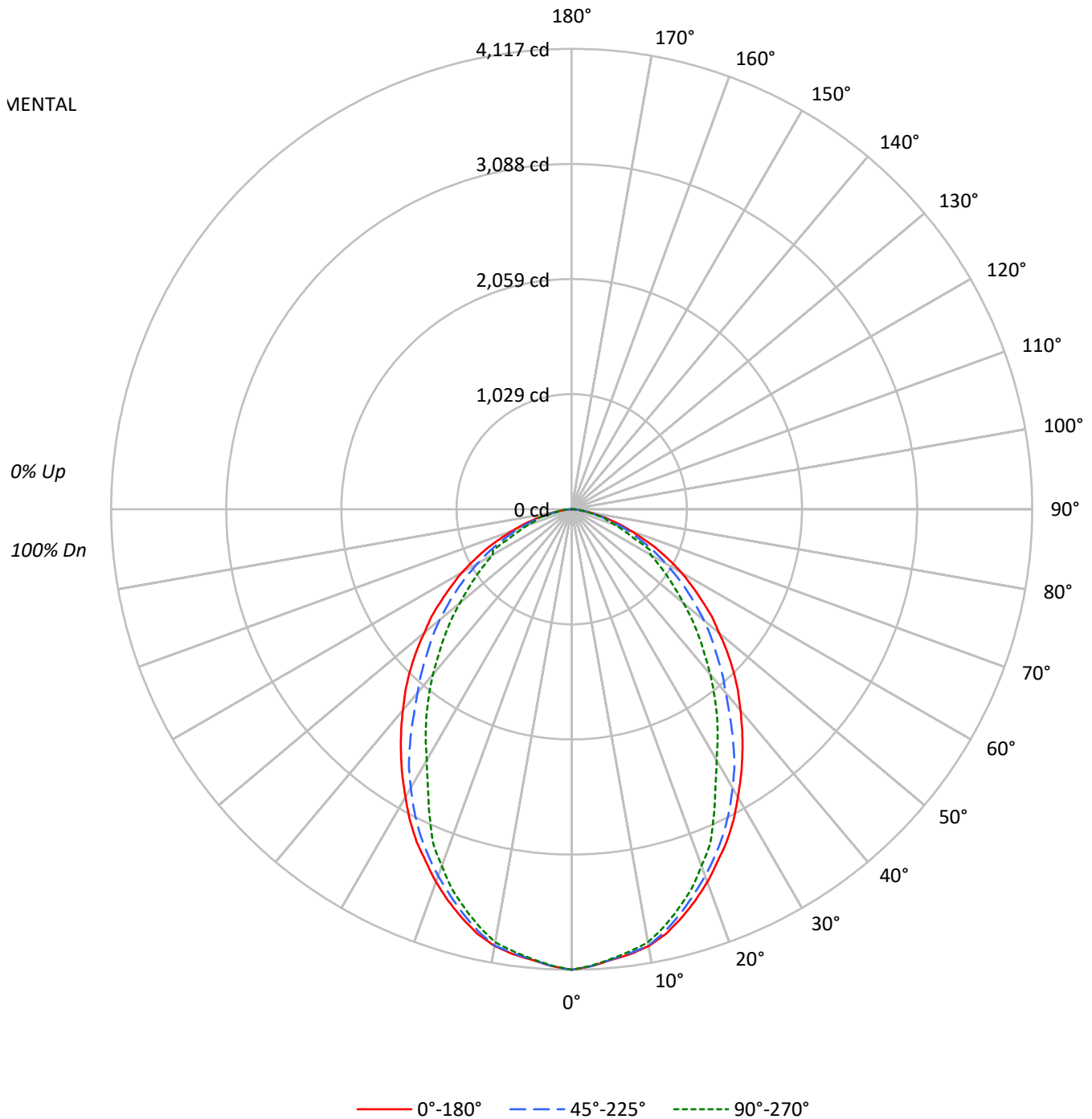
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5540	5540	5540
5°	5465	5458	5452
10°	5417	5411	5372
15°	5271	5218	5145
20°	5078	4996	4860
25°	4869	4763	4466
30°	4615	4467	4023
35°	4370	4128	3722
40°	4122	3762	3386
45°	3886	3478	3061
50°	3597	3228	2730
55°	3328	2925	2445
60°	3049	2613	2190
65°	2682	2288	1940
70°	2210	2004	1648
75°	1757	1534	1608
80°	1180	1106	1033
85°	735	881	1028

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3886 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	383.3	4.7
10°-20°	1051.9	13.0
20°-30°	1456.2	18.0
30°-40°	1552.8	19.2
40°-50°	1416.6	17.5
50°-60°	1109.8	13.7
60°-70°	723.3	8.9
70°-80°	320.5	4.0
80°-90°	68.8	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°	2891.4	35.8
0°-40°	4444.1	55.0
0°-60°	6970.5	86.2
0°-90°	8083.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8083.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4117	4117	4117	4117	4117	
5°	4046	4041	4041	4036	4036	384
15°	3784	3784	3746	3708	3694	1064
25°	3280	3261	3208	3094	3008	1506
35°	2661	2642	2513	2323	2266	1663
45°	2042	1999	1828	1676	1609	1573
55°	1418	1376	1247	1100	1042	1272
65°	842	795	719	733	609	830
75°	338	314	295	281	309	362
85°	48	52	57	62	67	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4117.4	4117.4	4117.4	4117.4	4117.4
2.5°	4088.8	4088.8	4088.8	4084.1	4084.1
5°	4046.0	4041.2	4041.2	4036.5	4036.5
7.5°	4012.7	4007.9	4003.1	3998.4	3988.9
10°	3965.1	3965.1	3960.3	3936.5	3931.7
12.5°	3888.9	3884.1	3865.1	3831.8	3822.3
15°	3784.2	3784.2	3746.1	3708.0	3693.7
17.5°	3669.9	3665.2	3617.6	3579.5	3560.5
20°	3546.2	3536.7	3489.1	3427.2	3393.9
22.5°	3408.1	3408.1	3351.0	3270.1	3236.8
25°	3279.6	3260.6	3208.2	3094.0	3008.3
27.5°	3132.1	3103.5	3046.4	2884.5	2784.6
30°	2970.2	2955.9	2875.0	2665.6	2589.4
32.5°	2817.9	2794.1	2708.4	2489.5	2427.6
35°	2660.8	2641.8	2513.3	2322.9	2265.7
37.5°	2503.7	2479.9	2318.1	2165.8	2094.4
40°	2346.7	2318.1	2142.0	2003.9	1927.8
42.5°	2199.1	2161.0	1989.7	1842.1	1756.4
45°	2042.0	1999.2	1827.8	1675.5	1608.9
47.5°	1884.9	1846.9	1689.8	1532.7	1456.6
50°	1718.3	1685.0	1542.2	1385.2	1304.2
52.5°	1580.3	1527.9	1389.9	1232.8	1166.2
55°	1418.5	1375.6	1247.1	1099.6	1042.4
57.5°	1270.9	1228.1	1109.1	971.0	923.4
60°	1132.9	1071.0	971.0	852.0	814.0
62.5°	980.6	933.0	847.3	747.3	794.9
65°	842.5	794.9	718.8	733.0	609.3
67.5°	690.2	666.4	599.8	533.1	514.1
70°	561.7	533.1	509.3	437.9	418.9
72.5°	447.4	418.9	385.6	347.5	333.2
75°	338.0	314.2	295.1	280.8	309.4
77.5°	233.2	223.7	209.4	195.2	190.4
80°	152.3	147.6	142.8	138.0	133.3
82.5°	90.4	90.4	90.4	90.4	90.4
85°	47.6	52.4	57.1	61.9	66.6
87.5°	28.6	28.6	33.3	38.1	42.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)