

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: P562487

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-80-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562487
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-80-87-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8976.0 lumens
Efficiency: N/A
Efficacy: 103.9 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

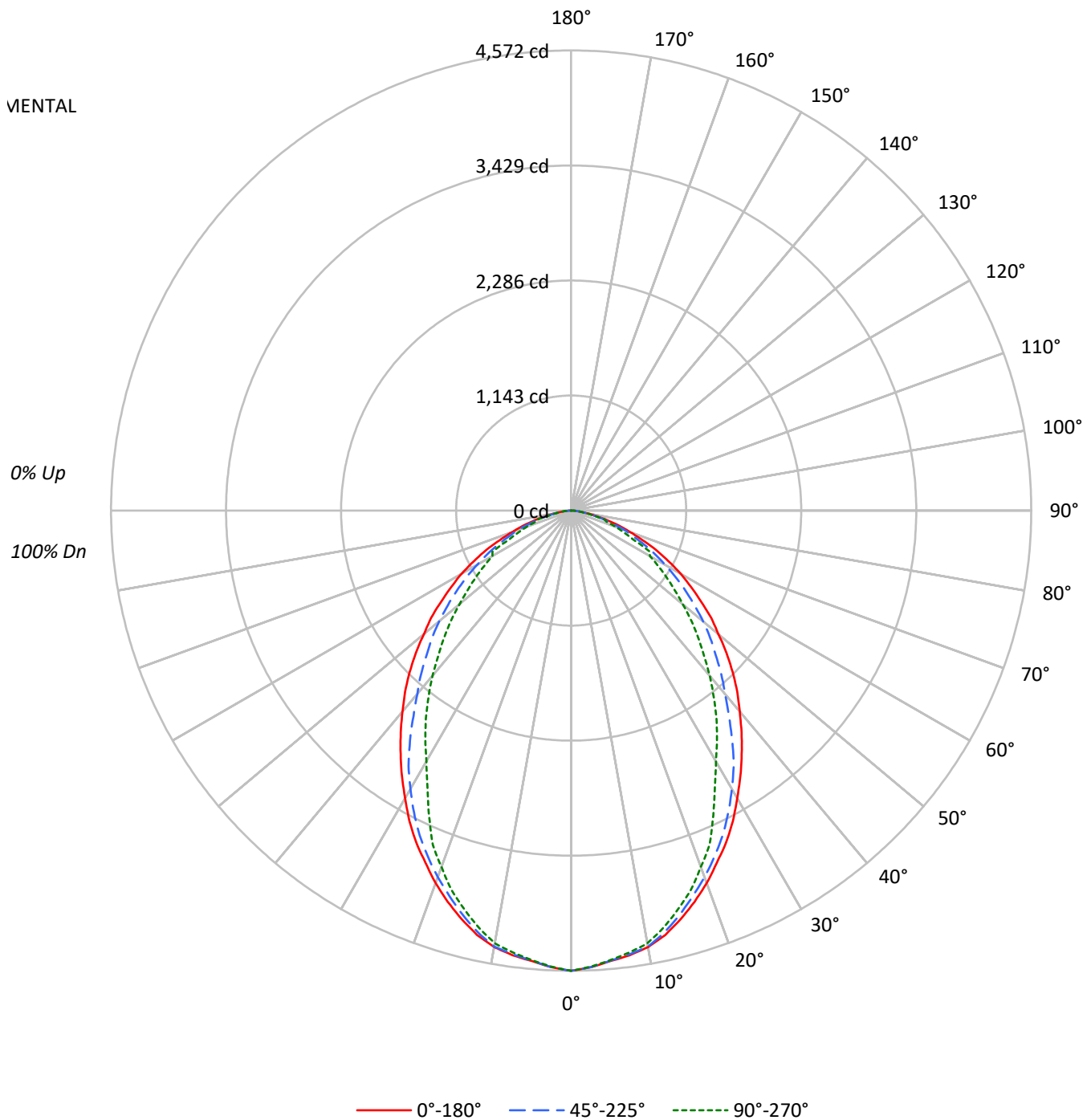
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6152	6152	6152
5°	6068	6061	6054
10°	6016	6008	5965
15°	5853	5795	5714
20°	5639	5548	5396
25°	5407	5289	4960
30°	5125	4960	4467
35°	4853	4584	4133
40°	4577	4178	3760
45°	4315	3862	3400
50°	3994	3585	3032
55°	3695	3249	2715
60°	3385	2902	2432
65°	2979	2541	2154
70°	2454	2225	1830
75°	1951	1704	1786
80°	1310	1229	1147
85°	817	979	1142

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4315 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	425.6	4.7
10°-20°	1168.1	13.0
20°-30°	1617.1	18.0
30°-40°	1724.3	19.2
40°-50°	1573.1	17.5
50°-60°	1232.4	13.7
60°-70°	803.2	8.9
70°-80°	355.9	4.0
80°-90°	76.4	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°	3210.8	35.8
0°-40°	4935.1	55.0
0°-60°	7740.5	86.2
0°-90°	8976.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8976.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4572	4572	4572	4572	4572	
5°	4493	4488	4488	4482	4482	426
15°	4202	4202	4160	4118	4102	1181
25°	3642	3621	3563	3436	3341	1672
35°	2955	2934	2791	2580	2516	1847
45°	2268	2220	2030	1861	1787	1747
55°	1575	1528	1385	1221	1158	1413
65°	936	883	798	814	677	922
75°	375	349	328	312	344	402
85°	53	58	63	69	74	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4572.3	4572.3	4572.3	4572.3	4572.3
2.5°	4540.5	4540.5	4540.5	4535.3	4535.3
5°	4493.0	4487.7	4487.7	4482.4	4482.4
7.5°	4456.0	4450.7	4445.4	4440.1	4429.5
10°	4403.1	4403.1	4397.8	4371.4	4366.1
12.5°	4318.5	4313.2	4292.1	4255.1	4244.5
15°	4202.2	4202.2	4160.0	4117.7	4101.8
17.5°	4075.4	4070.1	4017.2	3975.0	3953.8
20°	3938.0	3927.4	3874.5	3805.8	3768.8
22.5°	3784.7	3784.7	3721.2	3631.4	3594.4
25°	3641.9	3620.8	3562.7	3435.8	3340.7
27.5°	3478.1	3446.4	3382.9	3203.2	3092.2
30°	3298.4	3282.5	3192.6	2960.1	2875.5
32.5°	3129.2	3102.8	3007.6	2764.5	2695.8
35°	2954.8	2933.6	2790.9	2579.5	2516.1
37.5°	2780.4	2753.9	2574.2	2405.1	2325.8
40°	2605.9	2574.2	2378.6	2225.3	2140.8
42.5°	2442.1	2399.8	2209.5	2045.6	1950.5
45°	2267.6	2220.1	2029.8	1860.6	1786.6
47.5°	2093.2	2050.9	1876.5	1702.0	1617.5
50°	1908.2	1871.2	1712.6	1538.2	1448.3
52.5°	1754.9	1696.8	1543.5	1369.0	1295.0
55°	1575.2	1527.6	1384.9	1221.0	1157.6
57.5°	1411.3	1363.7	1231.6	1078.3	1025.5
60°	1258.0	1189.3	1078.3	946.2	903.9
62.5°	1088.9	1036.0	940.9	829.9	882.7
65°	935.6	882.7	798.2	814.0	676.6
67.5°	766.4	740.0	666.0	592.0	570.9
70°	623.7	592.0	565.6	486.3	465.2
72.5°	496.9	465.2	428.2	385.9	370.0
75°	375.3	348.9	327.7	311.9	343.6
77.5°	259.0	248.4	232.6	216.7	211.4
80°	169.1	163.9	158.6	153.3	148.0
82.5°	100.4	100.4	100.4	100.4	100.4
85°	52.9	58.1	63.4	68.7	74.0
87.5°	31.7	31.7	37.0	42.3	47.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)