

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: P562563

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-81-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562563
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-40-UNV-81-85-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9003.0 lumens
Efficiency: N/A
Efficacy: 104.2 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

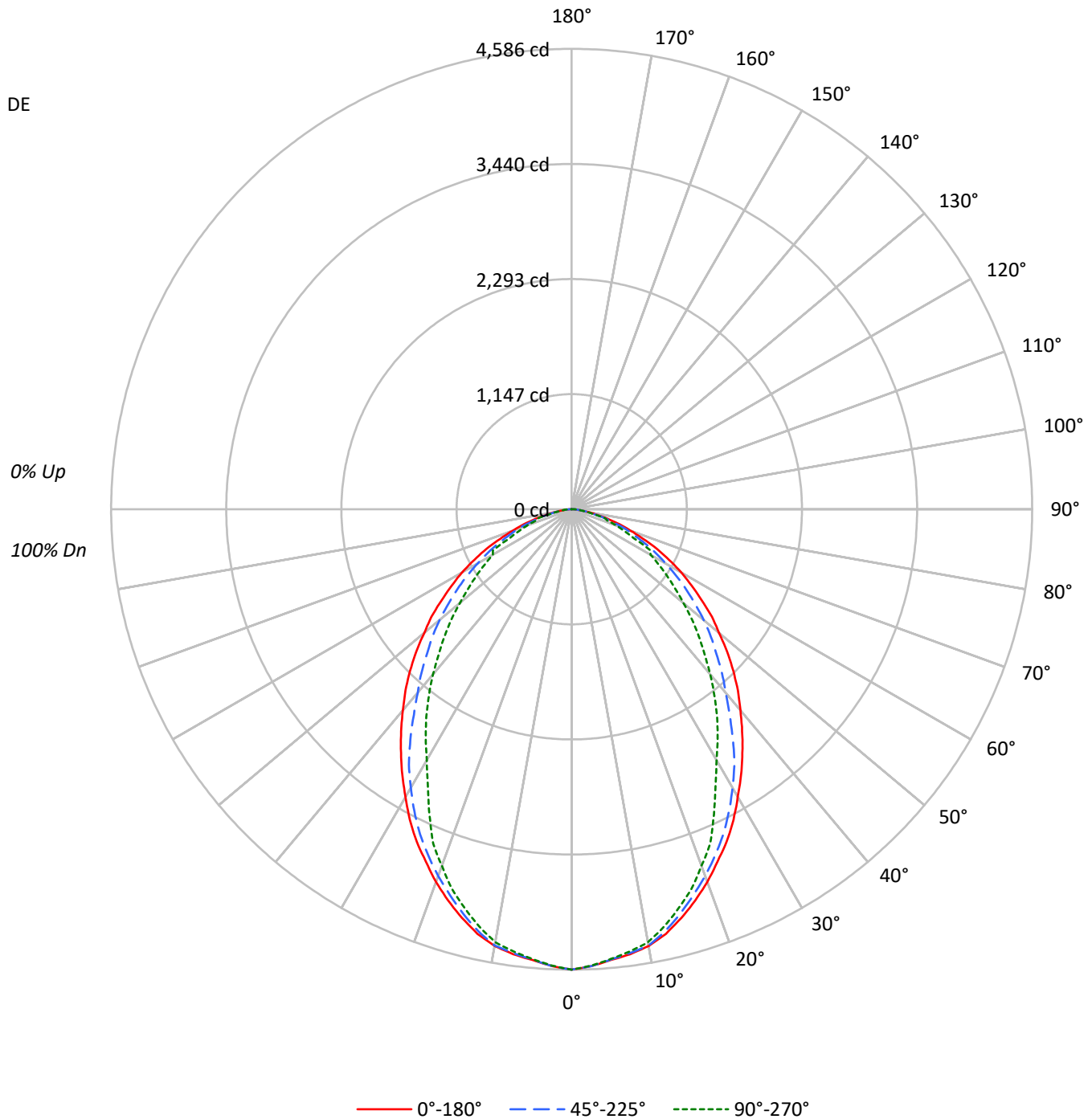
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6170	6170	6170
5°	6087	6079	6072
10°	6034	6027	5983
15°	5871	5812	5731
20°	5655	5564	5412
25°	5423	5305	4974
30°	5140	4975	4481
35°	4868	4598	4145
40°	4591	4190	3771
45°	4328	3874	3410
50°	4006	3596	3041
55°	3706	3259	2724
60°	3395	2911	2440
65°	2988	2549	2160
70°	2461	2232	1836
75°	1957	1709	1791
80°	1315	1233	1150
85°	818	982	1145

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4328 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	426.9	4.7
10°-20°	1171.6	13.0
20°-30°	1622.0	18.0
30°-40°	1729.5	19.2
40°-50°	1577.8	17.5
50°-60°	1236.1	13.7
60°-70°	805.6	8.9
70°-80°	356.9	4.0
80°-90°	76.6	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°	3220.4	35.8
0°-40°	4949.9	55.0
0°-60°	7763.8	86.2
0°-90°	9003.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9003.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4586	4586	4586	4586	4586	
5°	4506	4501	4501	4496	4496	428
15°	4215	4215	4172	4130	4114	1185
25°	3653	3632	3573	3446	3351	1677
35°	2964	2942	2799	2587	2524	1853
45°	2274	2227	2036	1866	1792	1752
55°	1580	1532	1389	1225	1161	1417
65°	938	885	801	816	679	925
75°	376	350	329	313	345	403
85°	53	58	64	69	74	74
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4586.0	4586.0	4586.0	4586.0	4586.0
2.5°	4554.2	4554.2	4554.2	4548.9	4548.9
5°	4506.5	4501.2	4501.2	4495.9	4495.9
7.5°	4469.4	4464.1	4458.8	4453.5	4442.9
10°	4416.4	4416.4	4411.1	4384.5	4379.2
12.5°	4331.5	4326.2	4305.0	4267.9	4257.3
15°	4214.9	4214.9	4172.5	4130.1	4114.2
17.5°	4087.6	4082.3	4029.3	3986.9	3965.7
20°	3949.8	3939.2	3886.2	3817.3	3780.1
22.5°	3796.0	3796.0	3732.4	3642.3	3605.2
25°	3652.9	3631.7	3573.4	3446.1	3350.7
27.5°	3488.5	3456.7	3393.1	3212.9	3101.5
30°	3308.3	3292.4	3202.3	2969.0	2884.1
32.5°	3138.6	3112.1	3016.7	2772.8	2703.9
35°	2963.7	2942.5	2799.3	2587.3	2523.6
37.5°	2788.7	2762.2	2581.9	2412.3	2332.8
40°	2613.8	2581.9	2385.8	2232.0	2147.2
42.5°	2449.4	2407.0	2216.1	2051.8	1956.3
45°	2274.4	2226.7	2035.9	1866.2	1792.0
47.5°	2099.5	2057.1	1882.1	1707.2	1622.3
50°	1913.9	1876.8	1717.8	1542.8	1452.7
52.5°	1760.2	1701.9	1548.1	1373.2	1298.9
55°	1579.9	1532.2	1389.1	1224.7	1161.1
57.5°	1415.6	1367.8	1235.3	1081.6	1028.5
60°	1261.8	1192.9	1081.6	949.0	906.6
62.5°	1092.2	1039.1	943.7	832.4	885.4
65°	938.4	885.4	800.6	816.5	678.6
67.5°	768.8	742.2	668.0	593.8	572.6
70°	625.6	593.8	567.3	487.8	466.6
72.5°	498.4	466.6	429.4	387.0	371.1
75°	376.4	349.9	328.7	312.8	344.6
77.5°	259.8	249.2	233.3	217.4	212.1
80°	169.7	164.4	159.1	153.8	148.4
82.5°	100.7	100.7	100.7	100.7	100.7
85°	53.0	58.3	63.6	68.9	74.2
87.5°	31.8	31.8	37.1	42.4	47.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)