

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: P562577

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-82-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562577
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-82-84-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8992.0 lumens
Efficiency: N/A
Efficacy: 104.1 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

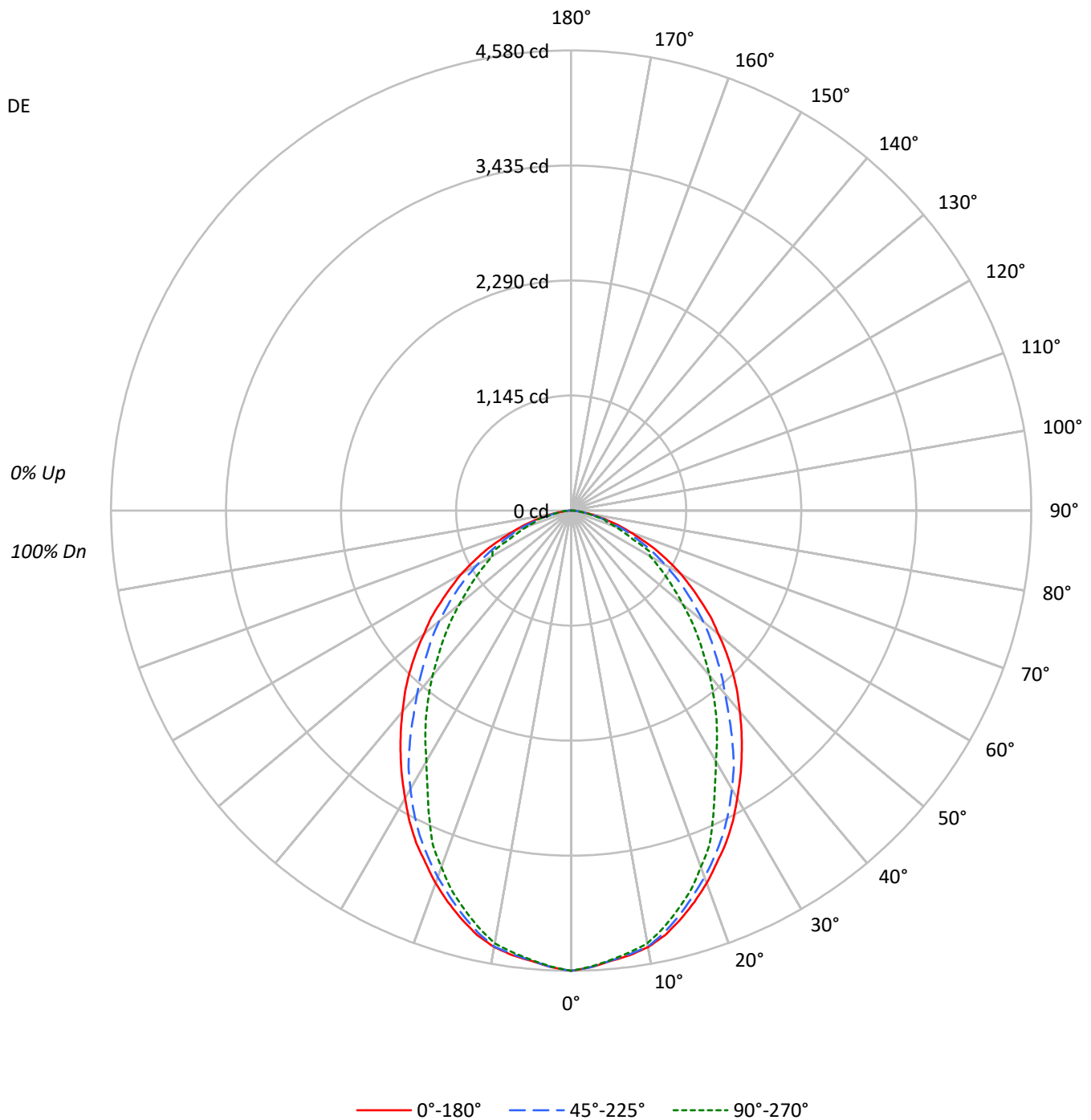
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6163	6163	6163
5°	6079	6072	6065
10°	6027	6019	5976
15°	5864	5805	5724
20°	5649	5558	5406
25°	5416	5298	4968
30°	5134	4969	4475
35°	4862	4592	4140
40°	4585	4185	3767
45°	4323	3869	3406
50°	4001	3591	3037
55°	3702	3255	2720
60°	3391	2907	2437
65°	2984	2546	2158
70°	2458	2229	1833
75°	1955	1707	1789
80°	1313	1231	1149
85°	818	980	1144

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4323 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	426.4	4.7
10°-20°	1170.1	13.0
20°-30°	1620.0	18.0
30°-40°	1727.4	19.2
40°-50°	1575.9	17.5
50°-60°	1234.6	13.7
60°-70°	804.6	8.9
70°-80°	356.5	4.0
80°-90°	76.5	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°	3216.5	35.8
0°-40°	4943.9	55.0
0°-60°	7754.3	86.2
0°-90°	8992.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8992.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4580	4580	4580	4580	4580	
5°	4501	4496	4496	4490	4490	427
15°	4210	4210	4167	4125	4109	1183
25°	3648	3627	3569	3442	3347	1675
35°	2960	2939	2796	2584	2520	1851
45°	2272	2224	2033	1864	1790	1750
55°	1578	1530	1387	1223	1160	1415
65°	937	884	800	816	678	924
75°	376	350	328	312	344	403
85°	53	58	64	69	74	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4580.4	4580.4	4580.4	4580.4	4580.4
2.5°	4548.6	4548.6	4548.6	4543.3	4543.3
5°	4501.0	4495.7	4495.7	4490.4	4490.4
7.5°	4463.9	4458.6	4453.3	4448.0	4437.4
10°	4411.0	4411.0	4405.7	4379.2	4373.9
12.5°	4326.2	4320.9	4299.8	4262.7	4252.1
15°	4209.7	4209.7	4167.4	4125.0	4109.1
17.5°	4082.6	4077.4	4024.4	3982.0	3960.9
20°	3945.0	3934.4	3881.4	3812.6	3775.5
22.5°	3791.4	3791.4	3727.9	3637.8	3600.8
25°	3648.4	3627.3	3569.0	3441.9	3346.6
27.5°	3484.3	3452.5	3389.0	3208.9	3097.7
30°	3304.2	3288.4	3198.3	2965.3	2880.6
32.5°	3134.8	3108.3	3013.0	2769.4	2700.6
35°	2960.1	2938.9	2795.9	2584.1	2520.5
37.5°	2785.3	2758.8	2578.8	2409.3	2329.9
40°	2610.6	2578.8	2382.9	2229.3	2144.6
42.5°	2446.4	2404.1	2213.4	2049.3	1954.0
45°	2271.7	2224.0	2033.4	1863.9	1789.8
47.5°	2096.9	2054.6	1879.8	1705.1	1620.4
50°	1911.6	1874.5	1715.7	1540.9	1450.9
52.5°	1758.0	1699.8	1546.2	1371.5	1297.3
55°	1578.0	1530.3	1387.4	1223.2	1159.7
57.5°	1413.8	1366.2	1233.8	1080.2	1027.3
60°	1260.3	1191.4	1080.2	947.9	905.5
62.5°	1090.8	1037.9	942.6	831.4	884.3
65°	937.3	884.3	799.6	815.5	677.8
67.5°	767.8	741.3	667.2	593.1	571.9
70°	624.8	593.1	566.6	487.2	466.0
72.5°	497.8	466.0	428.9	386.6	370.7
75°	376.0	349.5	328.3	312.4	344.2
77.5°	259.5	248.9	233.0	217.1	211.8
80°	169.4	164.2	158.9	153.6	148.3
82.5°	100.6	100.6	100.6	100.6	100.6
85°	53.0	58.2	63.5	68.8	74.1
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)