

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: P563730

Luminaire Tested: FSR-24-4-LD4-4HI-40-UNV-82-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563730
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-LD4-4HI-40-UNV-82-85-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14811.0 lumens
Efficiency: N/A
Efficacy: 85.7 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

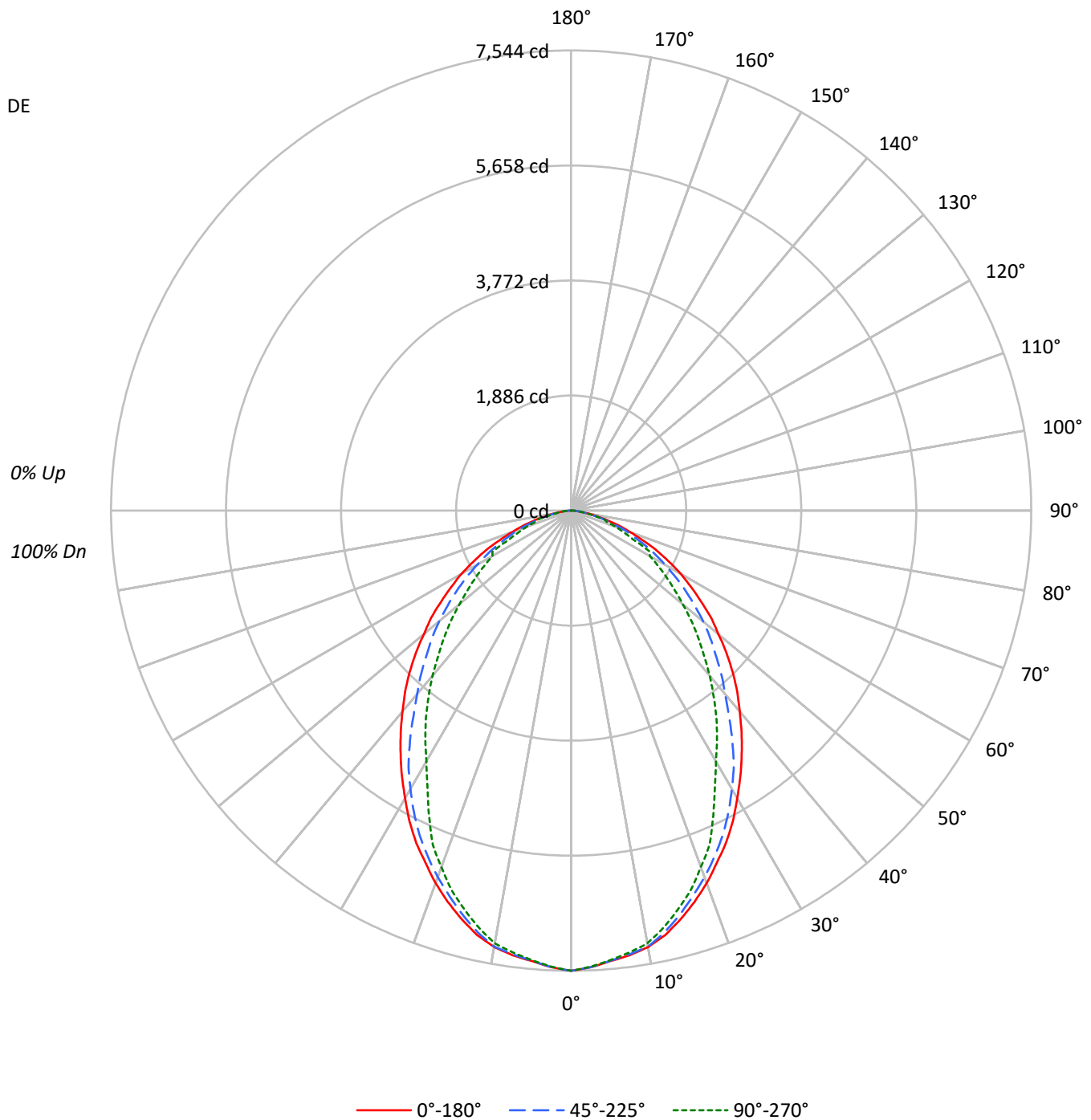
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	10151	10151	10151
5°	10013	10001	9990
10°	9926	9914	9843
15°	9659	9562	9428
20°	9304	9154	8904
25°	8922	8727	8183
30°	8456	8185	7372
35°	8008	7564	6819
40°	7552	6894	6204
45°	7120	6373	5609
50°	6591	5915	5002
55°	6097	5361	4481
60°	5586	4788	4014
65°	4915	4193	3554
70°	4049	3672	3019
75°	3219	2811	2947
80°	2163	2028	1892
85°	1346	1616	1885

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7120 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	702.3	4.7
10°-20°	1927.4	13.0
20°-30°	2668.3	18.0
30°-40°	2845.2	19.2
40°-50°	2595.7	17.5
50°-60°	2033.5	13.7
60°-70°	1325.3	8.9
70°-80°	587.2	4.0
80°-90°	126.1	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°	5298.0	35.8
0°-40°	8143.2	55.0
0°-60°	12772.4	86.2
0°-90°	14811.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14811.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7544	7544	7544	7544	7544	
5°	7414	7405	7405	7396	7396	704
15°	6934	6934	6864	6794	6768	1949
25°	6010	5975	5879	5669	5512	2759
35°	4876	4841	4605	4256	4152	3048
45°	3742	3663	3349	3070	2948	2882
55°	2599	2521	2285	2015	1910	2331
65°	1544	1457	1317	1343	1116	1521
75°	619	576	541	515	567	664
85°	87	96	105	113	122	121
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7544.5	7544.5	7544.5	7544.5	7544.5
2.5°	7492.2	7492.2	7492.2	7483.5	7483.5
5°	7413.7	7405.0	7405.0	7396.3	7396.3
7.5°	7352.6	7343.9	7335.2	7326.5	7309.0
10°	7265.4	7265.4	7256.7	7213.1	7204.4
12.5°	7125.9	7117.1	7082.3	7021.2	7003.8
15°	6934.0	6934.0	6864.2	6794.4	6768.3
17.5°	6724.7	6715.9	6628.7	6558.9	6524.1
20°	6497.9	6480.4	6393.2	6279.8	6218.8
22.5°	6244.9	6244.9	6140.3	5992.0	5931.0
25°	6009.5	5974.6	5878.6	5669.3	5512.3
27.5°	5739.1	5686.7	5582.1	5285.5	5102.4
30°	5442.5	5416.4	5268.1	4884.3	4744.8
32.5°	5163.4	5119.8	4962.8	4561.6	4448.2
35°	4875.6	4840.7	4605.2	4256.3	4151.7
37.5°	4587.8	4544.2	4247.6	3968.5	3837.7
40°	4299.9	4247.6	3924.9	3672.0	3532.4
42.5°	4029.6	3959.8	3645.8	3375.4	3218.4
45°	3741.7	3663.2	3349.2	3070.1	2948.0
47.5°	3453.9	3384.1	3096.3	2808.5	2668.9
50°	3148.6	3087.6	2825.9	2538.1	2389.8
52.5°	2895.7	2799.8	2546.8	2259.0	2136.9
55°	2599.2	2520.7	2285.2	2014.8	1910.1
57.5°	2328.8	2250.3	2032.2	1779.3	1692.1
60°	2075.8	1962.4	1779.3	1561.2	1491.5
62.5°	1796.7	1709.5	1552.5	1369.4	1456.6
65°	1543.8	1456.6	1317.0	1343.2	1116.4
67.5°	1264.7	1221.1	1099.0	976.9	942.0
70°	1029.2	976.9	933.3	802.4	767.5
72.5°	819.9	767.5	706.5	636.7	610.5
75°	619.3	575.7	540.8	514.6	566.9
77.5°	427.4	409.9	383.8	357.6	348.9
80°	279.1	270.4	261.7	252.9	244.2
82.5°	165.7	165.7	165.7	165.7	165.7
85°	87.2	95.9	104.7	113.4	122.1
87.5°	52.3	52.3	61.1	69.8	78.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)