

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: P563841

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-81-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563841
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-LD4-4LO-35-UNV-81-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11073.0 lumens
Efficiency: N/A
Efficacy: 118.3 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

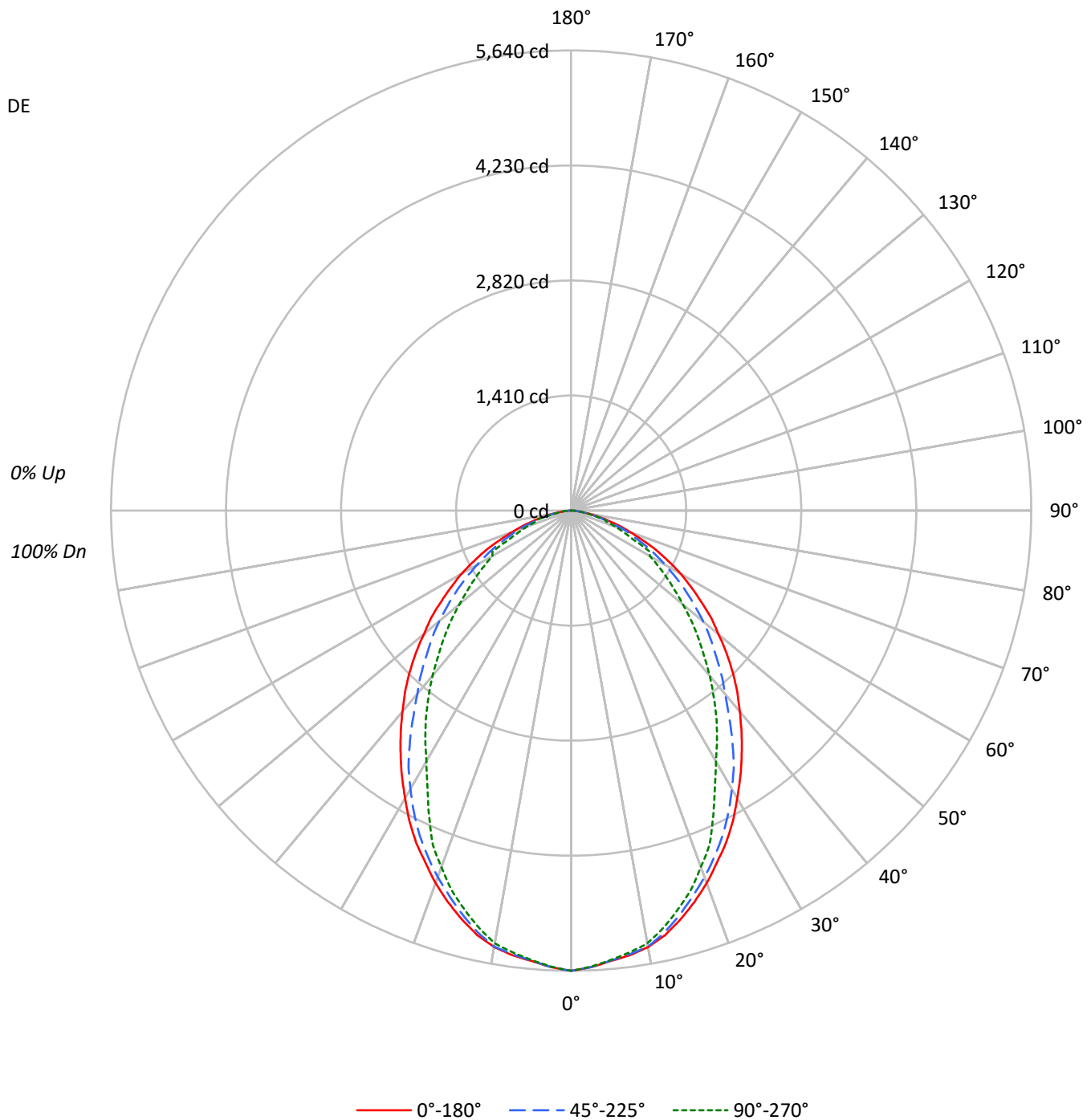
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7589	7589	7589
5°	7486	7477	7468
10°	7421	7412	7359
15°	7221	7148	7048
20°	6956	6844	6657
25°	6670	6525	6118
30°	6322	6119	5511
35°	5987	5655	5098
40°	5646	5154	4639
45°	5323	4765	4194
50°	4927	4422	3740
55°	4558	4008	3350
60°	4176	3580	3000
65°	3675	3135	2657
70°	3027	2745	2257
75°	2407	2102	2203
80°	1617	1516	1415
85°	1007	1207	1409

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5323 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	525.0	4.7
10°-20°	1441.0	13.0
20°-30°	1994.9	18.0
30°-40°	2127.1	19.2
40°-50°	1940.6	17.5
50°-60°	1520.3	13.7
60°-70°	990.9	8.9
70°-80°	439.0	4.0
80°-90°	94.2	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°	3960.9	35.8
0°-40°	6088.0	55.0
0°-60°	9548.9	86.2
0°-90°	11073.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11073.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5640	5640	5640	5640	5640	
5°	5543	5536	5536	5530	5530	526
15°	5184	5184	5132	5080	5060	1457
25°	4493	4467	4395	4238	4121	2063
35°	3645	3619	3443	3182	3104	2279
45°	2797	2739	2504	2295	2204	2155
55°	1943	1884	1708	1506	1428	1743
65°	1154	1089	985	1004	835	1137
75°	463	430	404	385	424	496
85°	65	72	78	85	91	90
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5640.4	5640.4	5640.4	5640.4	5640.4
2.5°	5601.3	5601.3	5601.3	5594.8	5594.8
5°	5542.6	5536.1	5536.1	5529.6	5529.6
7.5°	5497.0	5490.5	5483.9	5477.4	5464.4
10°	5431.8	5431.8	5425.3	5392.7	5386.1
12.5°	5327.4	5320.9	5294.8	5249.2	5236.2
15°	5184.0	5184.0	5131.8	5079.7	5060.1
17.5°	5027.5	5021.0	4955.8	4903.6	4877.5
20°	4857.9	4844.9	4779.7	4694.9	4649.3
22.5°	4668.8	4668.8	4590.6	4479.7	4434.1
25°	4492.8	4466.7	4395.0	4238.5	4121.1
27.5°	4290.6	4251.5	4173.3	3951.6	3814.6
30°	4068.9	4049.4	3938.5	3651.6	3547.3
32.5°	3860.3	3827.7	3710.3	3410.3	3325.6
35°	3645.1	3619.0	3442.9	3182.1	3103.9
37.5°	3429.9	3397.3	3175.6	2966.9	2869.1
40°	3214.7	3175.6	2934.3	2745.2	2640.9
42.5°	3012.6	2960.4	2725.7	2523.5	2406.2
45°	2797.4	2738.7	2504.0	2295.3	2204.0
47.5°	2582.2	2530.0	2314.9	2099.7	1995.3
50°	2354.0	2308.3	2112.7	1897.5	1786.7
52.5°	2164.9	2093.2	1904.1	1688.9	1597.6
55°	1943.2	1884.5	1708.4	1506.3	1428.0
57.5°	1741.0	1682.4	1519.3	1330.2	1265.0
60°	1551.9	1467.2	1330.2	1167.2	1115.0
62.5°	1343.3	1278.1	1160.7	1023.8	1089.0
65°	1154.2	1089.0	984.6	1004.2	834.7
67.5°	945.5	912.9	821.6	730.3	704.2
70°	769.4	730.3	697.7	599.9	573.8
72.5°	612.9	573.8	528.2	476.0	456.5
75°	463.0	430.4	404.3	384.7	423.8
77.5°	319.5	306.5	286.9	267.4	260.8
80°	208.7	202.1	195.6	189.1	182.6
82.5°	123.9	123.9	123.9	123.9	123.9
85°	65.2	71.7	78.2	84.8	91.3
87.5°	39.1	39.1	45.6	52.2	58.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)