

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: P562653

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562653
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-50-UNV-82-96-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9064.0 lumens
Efficiency: N/A
Efficacy: 104.9 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

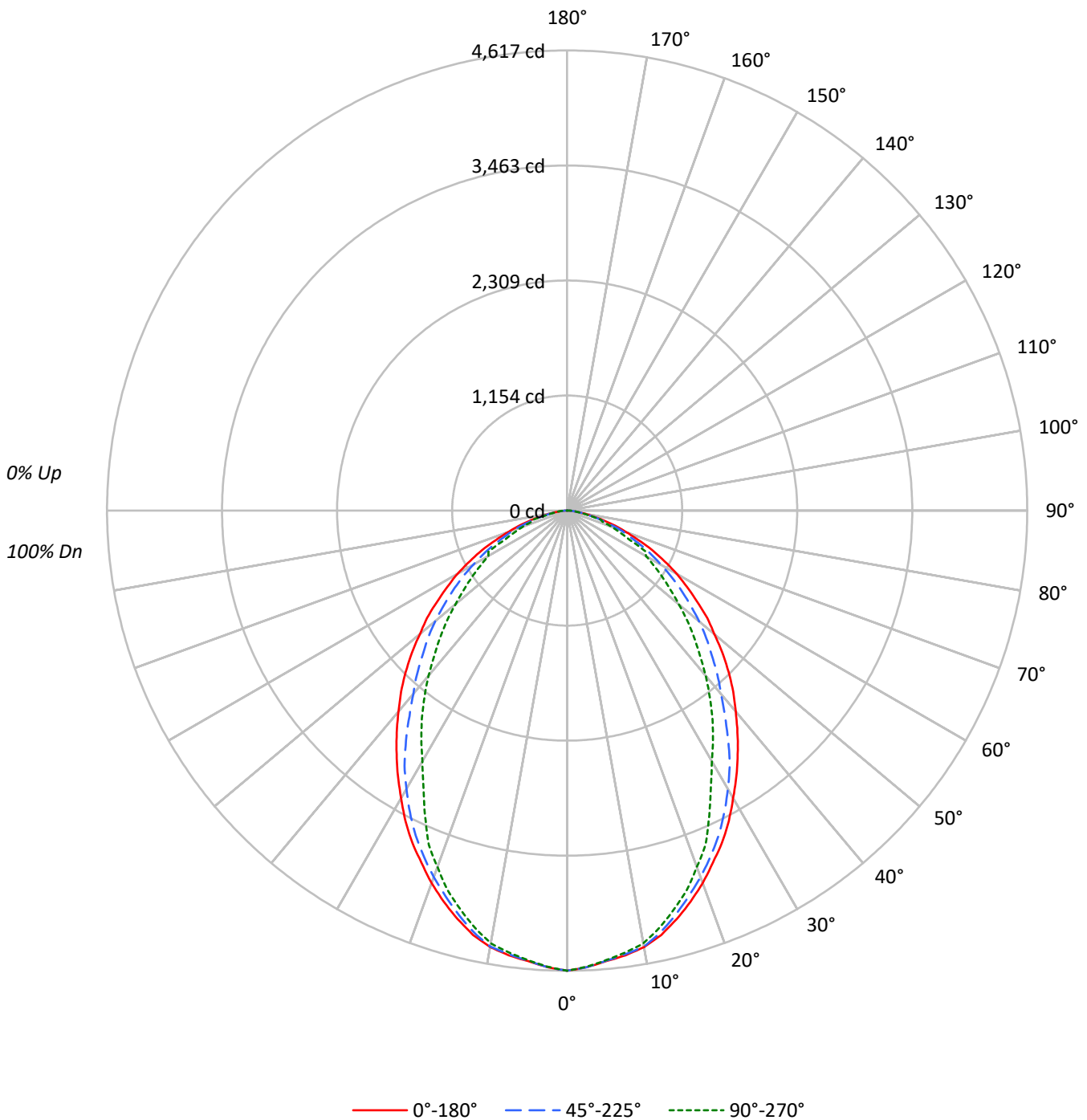
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6212	6212	6212
5°	6128	6121	6113
10°	6075	6067	6024
15°	5911	5851	5770
20°	5694	5602	5449
25°	5460	5341	5008
30°	5175	5009	4511
35°	4901	4629	4173
40°	4622	4219	3797
45°	4357	3900	3433
50°	4033	3620	3061
55°	3731	3281	2742
60°	3419	2930	2456
65°	3008	2566	2175
70°	2478	2247	1848
75°	1970	1720	1803
80°	1323	1241	1158
85°	824	990	1153

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4357 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	429.8	4.7
10°-20°	1179.5	13.0
20°-30°	1633.0	18.0
30°-40°	1741.2	19.2
40°-50°	1588.5	17.5
50°-60°	1244.5	13.7
60°-70°	811.1	8.9
70°-80°	359.3	4.0
80°-90°	77.1	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°	3242.3	35.8
0°-40°	4983.5	55.0
0°-60°	7816.4	86.2
0°-90°	9064.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9064.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4617	4617	4617	4617	4617	
5°	4537	4532	4532	4526	4526	431
15°	4243	4243	4201	4158	4142	1193
25°	3678	3656	3598	3470	3373	1688
35°	2984	2962	2818	2605	2541	1865
45°	2290	2242	2050	1879	1804	1764
55°	1591	1543	1398	1233	1169	1427
65°	945	891	806	822	683	931
75°	379	352	331	315	347	406
85°	53	59	64	69	75	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4617.1	4617.1	4617.1	4617.1	4617.1
2.5°	4585.1	4585.1	4585.1	4579.7	4579.7
5°	4537.0	4531.7	4531.7	4526.3	4526.3
7.5°	4499.7	4494.3	4489.0	4483.6	4473.0
10°	4446.3	4446.3	4440.9	4414.2	4408.9
12.5°	4360.9	4355.5	4334.2	4296.8	4286.1
15°	4243.4	4243.4	4200.7	4158.0	4142.0
17.5°	4115.3	4110.0	4056.6	4013.9	3992.6
20°	3976.6	3965.9	3912.5	3843.1	3805.8
22.5°	3821.8	3821.8	3757.7	3667.0	3629.6
25°	3677.7	3656.3	3597.6	3469.5	3373.4
27.5°	3512.2	3480.2	3416.1	3234.6	3122.5
30°	3330.7	3314.7	3223.9	2989.1	2903.7
32.5°	3159.9	3133.2	3037.1	2791.6	2722.2
35°	2983.8	2962.4	2818.3	2604.8	2540.7
37.5°	2807.6	2780.9	2599.4	2428.6	2348.6
40°	2631.5	2599.4	2401.9	2247.2	2161.8
42.5°	2466.0	2423.3	2231.1	2065.7	1969.6
45°	2289.9	2241.8	2049.7	1878.9	1804.1
47.5°	2113.7	2071.0	1894.9	1718.7	1633.3
50°	1926.9	1889.5	1729.4	1553.3	1462.5
52.5°	1772.1	1713.4	1558.6	1382.5	1307.7
55°	1590.6	1542.6	1398.5	1233.0	1168.9
57.5°	1425.2	1377.1	1243.7	1088.9	1035.5
60°	1270.4	1201.0	1088.9	955.4	912.7
62.5°	1099.6	1046.2	950.1	838.0	891.4
65°	944.8	891.4	806.0	822.0	683.2
67.5°	774.0	747.3	672.5	597.8	576.5
70°	629.8	597.8	571.1	491.1	469.7
72.5°	501.7	469.7	432.4	389.6	373.6
75°	379.0	352.3	330.9	314.9	346.9
77.5°	261.5	250.9	234.9	218.8	213.5
80°	170.8	165.5	160.1	154.8	149.5
82.5°	101.4	101.4	101.4	101.4	101.4
85°	53.4	58.7	64.1	69.4	74.7
87.5°	32.0	32.0	37.4	42.7	48.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)