

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: P562596

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-93-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562596
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-93-86-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7889.0 lumens
Efficiency: N/A
Efficacy: 91.3 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

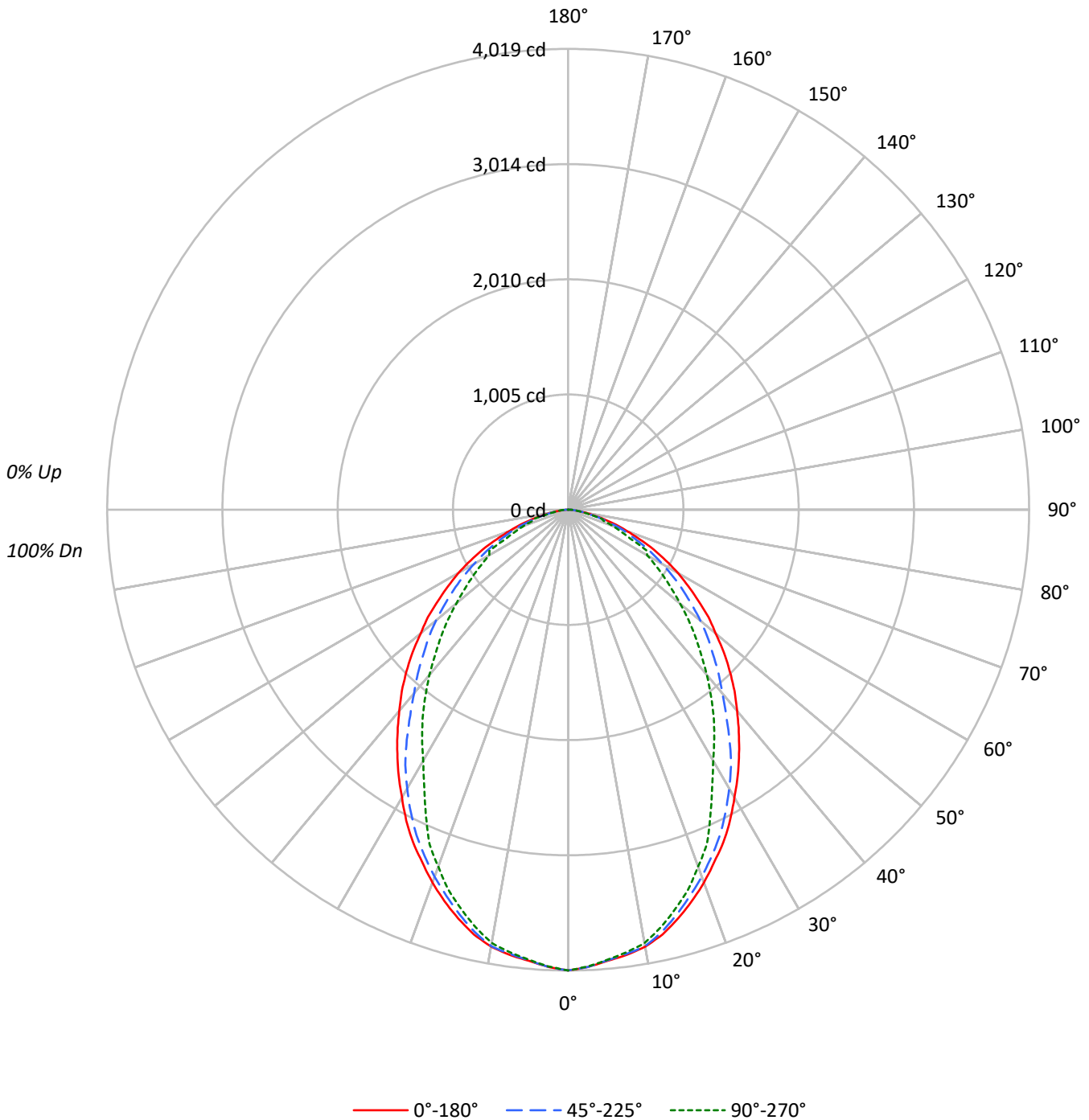
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5407	5407	5407
5°	5333	5327	5321
10°	5287	5281	5243
15°	5145	5093	5022
20°	4956	4876	4743
25°	4752	4649	4359
30°	4504	4360	3927
35°	4266	4029	3632
40°	4023	3672	3305
45°	3792	3395	2988
50°	3511	3151	2664
55°	3248	2855	2387
60°	2975	2550	2138
65°	2618	2233	1893
70°	2157	1956	1608
75°	1714	1497	1570
80°	1152	1080	1008
85°	718	860	1003

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3792 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	374.1	4.7
10°-20°	1026.6	13.0
20°-30°	1421.3	18.0
30°-40°	1515.5	19.2
40°-50°	1382.6	17.5
50°-60°	1083.1	13.7
60°-70°	705.9	8.9
70°-80°	312.7	4.0
80°-90°	67.2	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°	2822.0	35.8
0°-40°	4337.4	55.0
0°-60°	6803.2	86.2
0°-90°	7889.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7889.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4019	4019	4019	4019	4019	
5°	3949	3944	3944	3940	3940	375
15°	3693	3693	3656	3619	3605	1038
25°	3201	3182	3131	3020	2936	1470
35°	2597	2578	2453	2267	2211	1624
45°	1993	1951	1784	1635	1570	1535
55°	1384	1343	1217	1073	1017	1242
65°	822	776	702	715	595	810
75°	330	307	288	274	302	353
85°	46	51	56	60	65	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4018.6	4018.6	4018.6	4018.6	4018.6
2.5°	3990.7	3990.7	3990.7	3986.0	3986.0
5°	3948.9	3944.2	3944.2	3939.6	3939.6
7.5°	3916.3	3911.7	3907.1	3902.4	3893.1
10°	3869.9	3869.9	3865.2	3842.0	3837.4
12.5°	3795.6	3790.9	3772.3	3739.8	3730.5
15°	3693.4	3693.4	3656.2	3619.0	3605.1
17.5°	3581.9	3577.2	3530.8	3493.6	3475.0
20°	3461.1	3451.8	3405.3	3344.9	3312.4
22.5°	3326.3	3326.3	3270.6	3191.6	3159.1
25°	3200.9	3182.3	3131.2	3019.7	2936.1
27.5°	3056.9	3029.0	2973.3	2815.3	2717.7
30°	2898.9	2885.0	2806.0	2601.6	2527.3
32.5°	2750.3	2727.0	2643.4	2429.7	2369.3
35°	2597.0	2578.4	2452.9	2267.1	2211.4
37.5°	2443.7	2420.4	2262.5	2113.8	2044.1
40°	2290.3	2262.5	2090.6	1955.8	1881.5
42.5°	2146.3	2109.2	1941.9	1797.9	1714.3
45°	1993.0	1951.2	1784.0	1635.3	1570.3
47.5°	1839.7	1802.5	1649.2	1495.9	1421.6
50°	1677.1	1644.6	1505.2	1351.9	1272.9
52.5°	1542.4	1491.3	1356.6	1203.2	1138.2
55°	1384.4	1342.6	1217.2	1073.2	1017.4
57.5°	1240.4	1198.6	1082.5	947.7	901.3
60°	1105.7	1045.3	947.7	831.6	794.4
62.5°	957.0	910.6	826.9	729.4	775.8
65°	822.3	775.8	701.5	715.4	594.7
67.5°	673.6	650.4	585.4	520.3	501.7
70°	548.2	520.3	497.1	427.4	408.8
72.5°	436.7	408.8	376.3	339.1	325.2
75°	329.8	306.6	288.0	274.1	302.0
77.5°	227.6	218.3	204.4	190.5	185.8
80°	148.7	144.0	139.4	134.7	130.1
82.5°	88.3	88.3	88.3	88.3	88.3
85°	46.5	51.1	55.7	60.4	65.0
87.5°	27.9	27.9	32.5	37.2	41.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)