

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: P563555

Luminaire Tested: FSR-24-4-LD4-3STD-40-UNV-93-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563555
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-LD4-3STD-40-UNV-93-85-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11613.0 lumens
Efficiency: N/A
Efficacy: 116.2 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

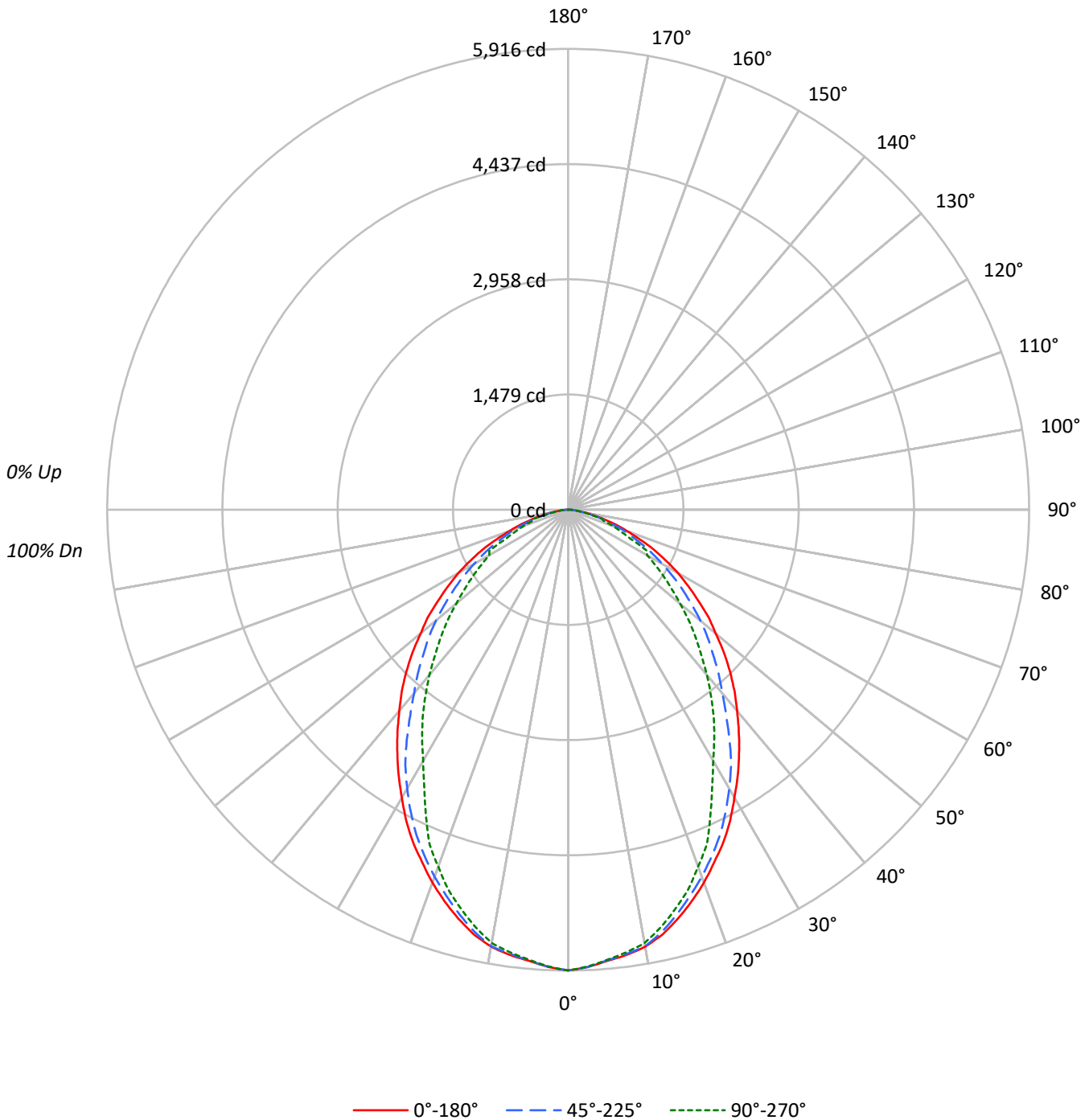
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	7959	7959	7959
5°	7851	7842	7833
10°	7783	7774	7718
15°	7573	7497	7392
20°	7295	7178	6982
25°	6995	6843	6417
30°	6630	6417	5780
35°	6279	5931	5347
40°	5922	5405	4865
45°	5582	4997	4398
50°	5168	4638	3922
55°	4780	4203	3513
60°	4380	3754	3147
65°	3854	3287	2787
70°	3175	2878	2367
75°	2524	2204	2311
80°	1695	1590	1484
85°	1056	1267	1477

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5582 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	550.7	4.7
10°-20°	1511.2	13.0
20°-30°	2092.2	18.0
30°-40°	2230.9	19.2
40°-50°	2035.2	17.5
50°-60°	1594.4	13.7
60°-70°	1039.2	8.9
70°-80°	460.4	4.0
80°-90°	98.8	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°	4154.1	35.8
0°-40°	6385.0	55.0
0°-60°	10014.6	86.2
0°-90°	11613.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11613.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5916	5916	5916	5916	5916	
5°	5813	5806	5806	5799	5799	552
15°	5437	5437	5382	5327	5307	1528
25°	4712	4684	4609	4445	4322	2163
35°	3823	3796	3611	3337	3255	2390
45°	2934	2872	2626	2407	2312	2260
55°	2038	1976	1792	1580	1498	1828
65°	1210	1142	1033	1053	875	1193
75°	486	451	424	404	444	520
85°	68	75	82	89	96	95
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5915.5	5915.5	5915.5	5915.5	5915.5
2.5°	5874.5	5874.5	5874.5	5867.6	5867.6
5°	5812.9	5806.1	5806.1	5799.2	5799.2
7.5°	5765.1	5758.2	5751.4	5744.5	5730.9
10°	5696.7	5696.7	5689.8	5655.6	5648.8
12.5°	5587.2	5580.4	5553.1	5505.2	5491.5
15°	5436.8	5436.8	5382.1	5327.4	5306.9
17.5°	5272.7	5265.8	5197.4	5142.7	5115.4
20°	5094.9	5081.2	5012.8	4923.9	4876.0
22.5°	4896.5	4896.5	4814.5	4698.2	4650.3
25°	4711.9	4684.5	4609.3	4445.2	4322.1
27.5°	4499.9	4458.9	4376.8	4144.3	4000.7
30°	4267.4	4246.9	4130.6	3829.7	3720.3
32.5°	4048.5	4014.3	3891.2	3576.7	3487.8
35°	3822.9	3795.5	3610.9	3337.3	3255.2
37.5°	3597.2	3563.0	3330.5	3111.6	3009.0
40°	3371.5	3330.5	3077.4	2879.1	2769.7
42.5°	3159.5	3104.8	2858.6	2646.6	2523.5
45°	2933.8	2872.3	2626.1	2407.2	2311.5
47.5°	2708.1	2653.4	2427.8	2202.1	2092.7
50°	2468.8	2420.9	2215.8	1990.1	1873.8
52.5°	2270.5	2195.2	1996.9	1771.2	1675.5
55°	2037.9	1976.4	1791.7	1579.7	1497.7
57.5°	1825.9	1764.4	1593.4	1395.1	1326.7
60°	1627.6	1538.7	1395.1	1224.1	1169.4
62.5°	1408.8	1340.4	1217.3	1073.7	1142.1
65°	1210.5	1142.1	1032.6	1053.2	875.4
67.5°	991.6	957.4	861.7	765.9	738.6
70°	807.0	765.9	731.7	629.2	601.8
72.5°	642.8	601.8	553.9	499.2	478.7
75°	485.6	451.4	424.0	403.5	444.5
77.5°	335.1	321.4	300.9	280.4	273.5
80°	218.8	212.0	205.2	198.3	191.5
82.5°	129.9	129.9	129.9	129.9	129.9
85°	68.4	75.2	82.1	88.9	95.7
87.5°	41.0	41.0	47.9	54.7	61.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)