

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: P563204

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-81-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563204
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-LD4-3HI-50-UNV-81-86-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11813.0 lumens
Efficiency: N/A
Efficacy: 91.1 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

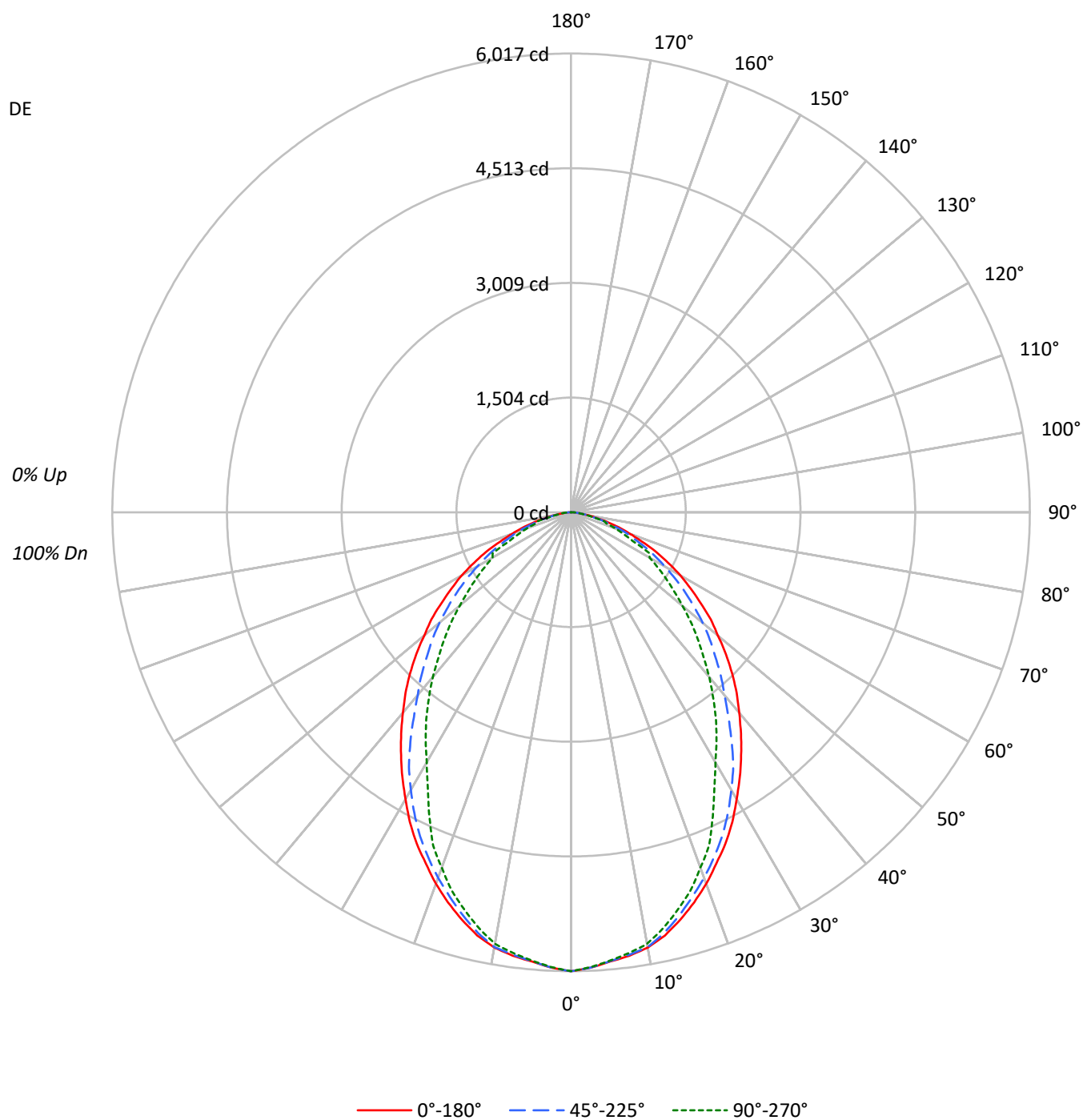
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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			
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°	8096	8096	8096
5°	7986	7977	7967
10°	7917	7908	7851
15°	7704	7626	7520
20°	7421	7301	7102
25°	7116	6961	6527
30°	6744	6528	5879
35°	6387	6033	5439
40°	6024	5498	4949
45°	5679	5083	4474
50°	5257	4718	3990
55°	4863	4275	3574
60°	4455	3819	3201
65°	3920	3344	2835
70°	3229	2928	2408
75°	2568	2242	2351
80°	1725	1617	1509
85°	1074	1289	1504

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 5679 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	560.1	4.7
10°-20°	1537.3	13.0
20°-30°	2128.2	18.0
30°-40°	2269.3	19.2
40°-50°	2070.3	17.5
50°-60°	1621.9	13.7
60°-70°	1057.1	8.9
70°-80°	468.3	4.0
80°-90°	100.6	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°	4225.6	35.8
0°-40°	6494.9	55.0
0°-60°	10187.1	86.2
0°-90°	11813.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11813.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6017	6017	6017	6017	6017	
5°	5913	5906	5906	5899	5899	561
15°	5530	5530	5475	5419	5398	1555
25°	4793	4765	4689	4522	4396	2200
35°	3889	3861	3673	3395	3311	2431
45°	2984	2922	2671	2449	2351	2299
55°	2073	2010	1823	1607	1524	1859
65°	1231	1162	1050	1071	890	1213
75°	494	459	431	410	452	529
85°	70	76	84	90	97	96
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6017.4	6017.4	6017.4	6017.4	6017.4
2.5°	5975.6	5975.6	5975.6	5968.7	5968.7
5°	5913.0	5906.1	5906.1	5899.1	5899.1
7.5°	5864.3	5857.4	5850.4	5843.5	5829.6
10°	5794.8	5794.8	5787.8	5753.0	5746.1
12.5°	5683.5	5676.5	5648.7	5600.0	5586.1
15°	5530.4	5530.4	5474.8	5419.1	5398.3
17.5°	5363.5	5356.5	5287.0	5231.3	5203.5
20°	5182.6	5168.7	5099.1	5008.7	4960.0
22.5°	4980.9	4980.9	4897.4	4779.1	4730.4
25°	4793.0	4765.2	4688.7	4521.7	4396.5
27.5°	4577.4	4535.6	4452.2	4215.6	4069.6
30°	4340.9	4320.0	4201.7	3895.6	3784.3
32.5°	4118.3	4083.5	3958.3	3638.3	3547.8
35°	3888.7	3860.9	3673.0	3394.8	3311.3
37.5°	3659.1	3624.3	3387.8	3165.2	3060.9
40°	3429.6	3387.8	3130.4	2928.7	2817.4
42.5°	3213.9	3158.3	2907.8	2692.2	2567.0
45°	2984.3	2921.7	2671.3	2448.7	2351.3
47.5°	2754.8	2699.1	2469.6	2240.0	2128.7
50°	2511.3	2462.6	2253.9	2024.3	1906.1
52.5°	2309.6	2233.0	2031.3	1801.7	1704.3
55°	2073.0	2010.4	1822.6	1607.0	1523.5
57.5°	1857.4	1794.8	1620.9	1419.1	1349.6
60°	1655.7	1565.2	1419.1	1245.2	1189.6
62.5°	1433.0	1363.5	1238.3	1092.2	1161.7
65°	1231.3	1161.7	1050.4	1071.3	890.4
67.5°	1008.7	973.9	876.5	779.1	751.3
70°	820.9	779.1	744.3	640.0	612.2
72.5°	653.9	612.2	563.5	507.8	487.0
75°	493.9	459.1	431.3	410.4	452.2
77.5°	340.9	327.0	306.1	285.2	278.3
80°	222.6	215.7	208.7	201.7	194.8
82.5°	132.2	132.2	132.2	132.2	132.2
85°	69.6	76.5	83.5	90.4	97.4
87.5°	41.7	41.7	48.7	55.7	62.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)