

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: P563978

Luminaire Tested: FSR-24-4-LD4-4LO-50-UNV-81-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563978
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-50-UNV-81-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9918.0 lumens
Efficiency: N/A
Efficacy: 106.0 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

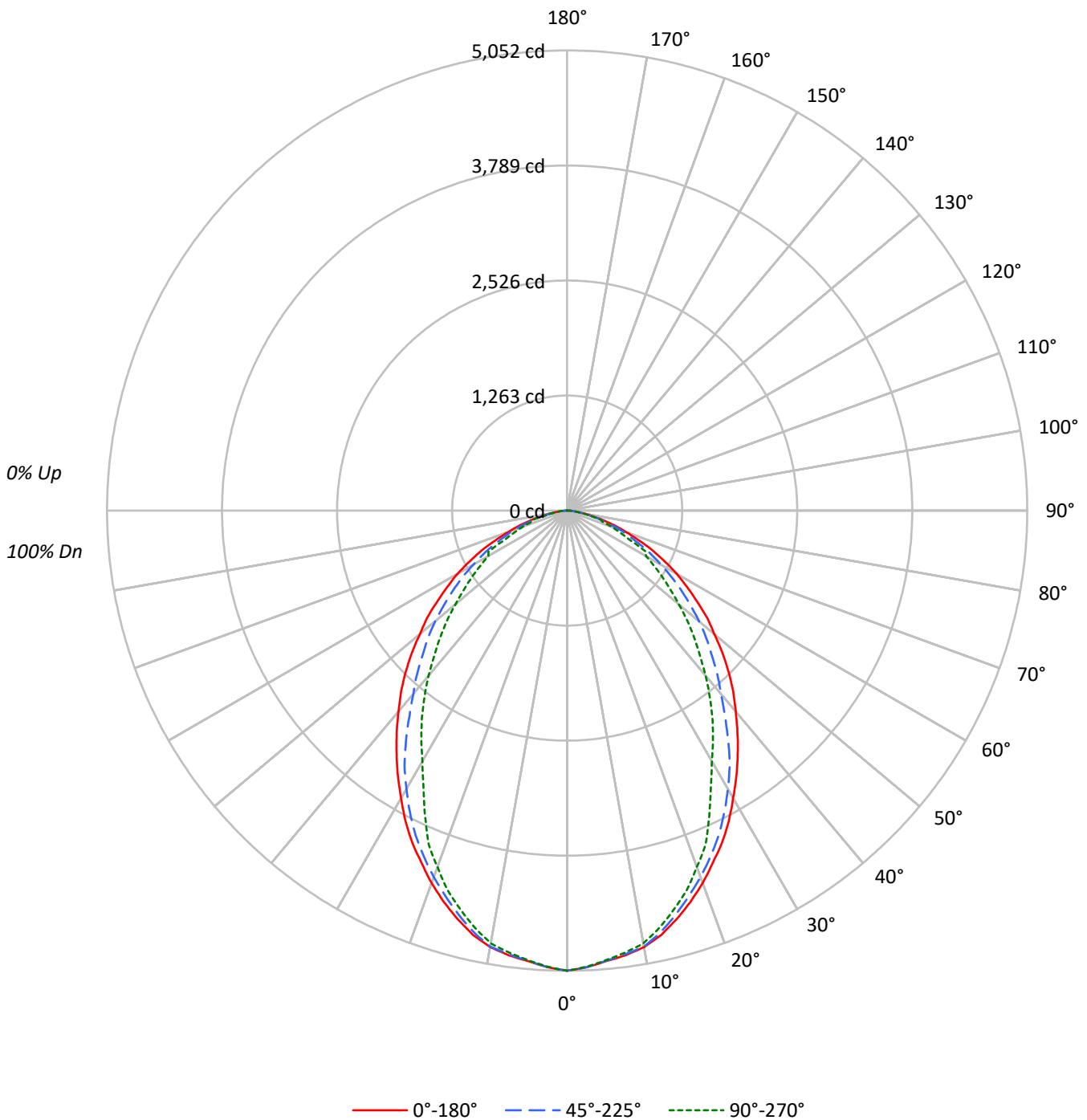
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6798	6798	6798
5°	6705	6697	6689
10°	6647	6639	6591
15°	6468	6403	6313
20°	6230	6130	5963
25°	5974	5844	5480
30°	5662	5481	4936
35°	5363	5065	4566
40°	5057	4616	4155
45°	4768	4268	3756
50°	4413	3961	3350
55°	4083	3590	3000
60°	3741	3206	2687
65°	3291	2808	2380
70°	2711	2458	2022
75°	2156	1882	1973
80°	1448	1358	1267
85°	902	1082	1263

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4768 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	470.3	4.7
10°-20°	1290.6	13.0
20°-30°	1786.8	18.0
30°-40°	1905.3	19.2
40°-50°	1738.2	17.5
50°-60°	1361.7	13.7
60°-70°	887.5	8.9
70°-80°	393.2	4.0
80°-90°	84.4	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°	3547.8	35.8
0°-40°	5453.0	55.0
0°-60°	8552.9	86.2
0°-90°	9918.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9918.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5052	5052	5052	5052	5052	
5°	4964	4959	4959	4953	4953	471
15°	4643	4643	4596	4550	4532	1305
25°	4024	4001	3936	3796	3691	1847
35°	3265	3242	3084	2850	2780	2041
45°	2506	2453	2243	2056	1974	1930
55°	1740	1688	1530	1349	1279	1561
65°	1034	975	882	899	748	1019
75°	415	386	362	345	380	444
85°	58	64	70	76	82	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5052.1	5052.1	5052.1	5052.1	5052.1
2.5°	5017.1	5017.1	5017.1	5011.2	5011.2
5°	4964.5	4958.6	4958.6	4952.8	4952.8
7.5°	4923.6	4917.8	4911.9	4906.1	4894.4
10°	4865.2	4865.2	4859.4	4830.2	4824.3
12.5°	4771.7	4765.9	4742.5	4701.7	4690.0
15°	4643.3	4643.3	4596.5	4549.8	4532.3
17.5°	4503.1	4497.2	4438.8	4392.1	4368.7
20°	4351.2	4339.5	4281.1	4205.2	4164.3
22.5°	4181.9	4181.9	4111.8	4012.5	3971.6
25°	4024.2	4000.8	3936.5	3796.4	3691.2
27.5°	3843.1	3808.1	3738.0	3539.4	3416.7
30°	3644.5	3627.0	3527.7	3270.7	3177.3
32.5°	3457.6	3428.4	3323.3	3054.6	2978.7
35°	3264.9	3241.5	3083.8	2850.2	2780.1
37.5°	3072.1	3042.9	2844.4	2657.5	2569.9
40°	2879.4	2844.4	2628.3	2458.9	2365.4
42.5°	2698.3	2651.6	2441.4	2260.3	2155.2
45°	2505.6	2453.0	2242.8	2055.9	1974.1
47.5°	2312.9	2266.1	2073.4	1880.7	1787.2
50°	2108.4	2067.6	1892.3	1699.6	1600.3
52.5°	1939.1	1874.8	1705.4	1512.7	1430.9
55°	1740.5	1687.9	1530.2	1349.2	1279.1
57.5°	1559.4	1506.9	1360.9	1191.5	1133.1
60°	1390.1	1314.1	1191.5	1045.5	998.7
62.5°	1203.2	1144.8	1039.6	917.0	975.4
65°	1033.8	975.4	881.9	899.4	747.6
67.5°	846.9	817.7	735.9	654.1	630.8
70°	689.2	654.1	624.9	537.3	514.0
72.5°	549.0	514.0	473.1	426.4	408.8
75°	414.7	385.5	362.1	344.6	379.6
77.5°	286.2	274.5	257.0	239.5	233.6
80°	186.9	181.1	175.2	169.4	163.5
82.5°	111.0	111.0	111.0	111.0	111.0
85°	58.4	64.2	70.1	75.9	81.8
87.5°	35.0	35.0	40.9	46.7	52.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)