

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: P563080

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-81-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563080
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-35-UNV-81-88-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9638.0 lumens
Efficiency: N/A
Efficacy: 74.4 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

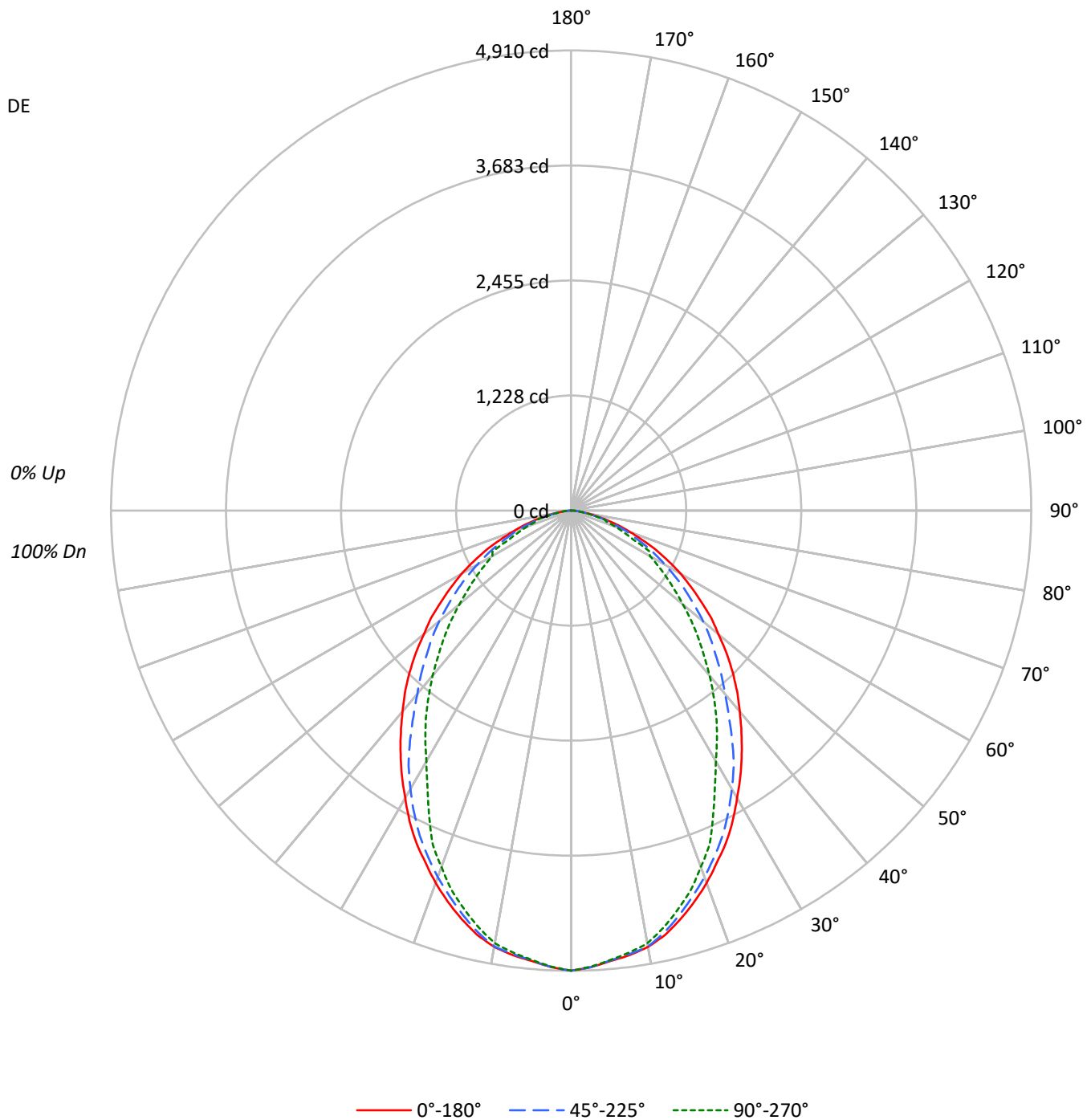
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									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	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°	6606	6606	6606
5°	6516	6508	6501
10°	6459	6452	6405
15°	6285	6222	6135
20°	6054	5957	5794
25°	5805	5679	5325
30°	5502	5326	4797
35°	5211	4922	4437
40°	4915	4486	4037
45°	4633	4147	3650
50°	4289	3849	3255
55°	3968	3488	2916
60°	3635	3116	2612
65°	3198	2728	2313
70°	2635	2389	1965
75°	2095	1829	1918
80°	1407	1320	1231
85°	877	1051	1227

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4633 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	457.0	4.7
10°-20°	1254.2	13.0
20°-30°	1736.4	18.0
30°-40°	1851.5	19.2
40°-50°	1689.1	17.5
50°-60°	1323.3	13.7
60°-70°	862.4	8.9
70°-80°	382.1	4.0
80°-90°	82.0	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°	3447.6	35.8
0°-40°	5299.1	55.0
0°-60°	8311.4	86.2
0°-90°	9638.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9638.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4910	4910	4910	4910	4910	
5°	4824	4819	4819	4813	4813	458
15°	4512	4512	4467	4421	4404	1268
25°	3910	3888	3825	3689	3587	1795
35°	3173	3150	2997	2770	2702	1984
45°	2435	2384	2180	1998	1918	1876
55°	1691	1640	1487	1311	1243	1517
65°	1005	948	857	874	726	990
75°	403	375	352	335	369	432
85°	57	62	68	74	80	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4909.5	4909.5	4909.5	4909.5	4909.5
2.5°	4875.4	4875.4	4875.4	4869.7	4869.7
5°	4824.3	4818.7	4818.7	4813.0	4813.0
7.5°	4784.6	4778.9	4773.3	4767.6	4756.2
10°	4727.8	4727.8	4722.2	4693.8	4688.1
12.5°	4637.0	4631.4	4608.7	4568.9	4557.6
15°	4512.2	4512.2	4466.8	4421.4	4404.3
17.5°	4376.0	4370.3	4313.5	4268.1	4245.4
20°	4228.4	4217.0	4160.3	4086.5	4046.8
22.5°	4063.8	4063.8	3995.7	3899.2	3859.5
25°	3910.5	3887.8	3825.4	3689.2	3587.0
27.5°	3734.6	3700.5	3632.4	3439.5	3320.3
30°	3541.6	3524.6	3428.1	3178.4	3087.6
32.5°	3360.0	3331.6	3229.5	2968.4	2894.6
35°	3172.7	3150.0	2996.8	2769.7	2701.6
37.5°	2985.4	2957.0	2764.1	2582.4	2497.3
40°	2798.1	2764.1	2554.1	2389.5	2298.7
42.5°	2622.2	2576.8	2372.4	2196.5	2094.3
45°	2434.9	2383.8	2179.5	1997.8	1918.4
47.5°	2247.6	2202.2	2014.9	1827.6	1736.8
50°	2048.9	2009.2	1838.9	1651.6	1555.1
52.5°	1884.3	1821.9	1657.3	1470.0	1390.5
55°	1691.4	1640.3	1487.0	1311.1	1243.0
57.5°	1515.4	1464.3	1322.4	1157.8	1101.1
60°	1350.8	1277.0	1157.8	1015.9	970.5
62.5°	1169.2	1112.4	1010.3	891.1	947.8
65°	1004.6	947.8	857.0	874.1	726.5
67.5°	823.0	794.6	715.1	635.7	613.0
70°	669.7	635.7	607.3	522.2	499.5
72.5°	533.5	499.5	459.7	414.3	397.3
75°	403.0	374.6	351.9	334.9	368.9
77.5°	278.1	266.8	249.7	232.7	227.0
80°	181.6	175.9	170.3	164.6	158.9
82.5°	107.8	107.8	107.8	107.8	107.8
85°	56.8	62.4	68.1	73.8	79.5
87.5°	34.1	34.1	39.7	45.4	51.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)