

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: P562390

Luminaire Tested: FSR-24-4-LD4-1STD-40-UNV-82-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562390
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-LD4-1STD-40-UNV-82-87-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2888.0 lumens
Efficiency: N/A
Efficacy: 86.7 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

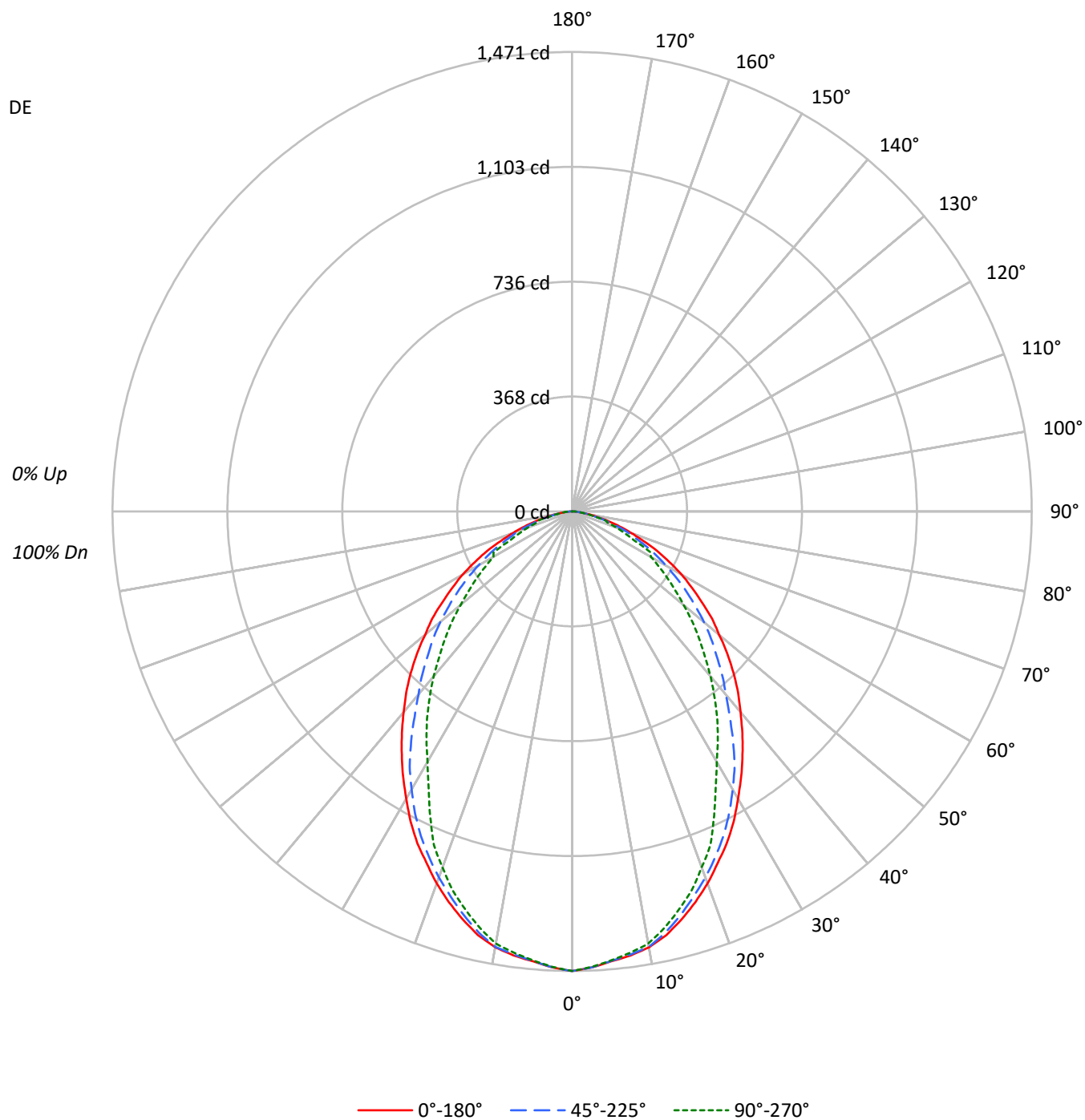
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1979	1979	1979
5°	1952	1950	1948
10°	1936	1933	1919
15°	1883	1864	1838
20°	1814	1785	1736
25°	1740	1702	1596
30°	1649	1596	1437
35°	1562	1475	1330
40°	1473	1344	1210
45°	1388	1243	1094
50°	1285	1153	975
55°	1189	1045	874
60°	1089	934	783
65°	958	818	693
70°	790	716	589
75°	627	548	574
80°	422	395	369
85°	262	315	367

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1388 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.9	4.7
10°-20°	375.8	13.0
20°-30°	520.3	18.0
30°-40°	554.8	19.2
40°-50°	506.1	17.5
50°-60°	396.5	13.7
60°-70°	258.4	8.9
70°-80°	114.5	4.0
80°-90°	24.6	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°	1033.1	35.8
0°-40°	1587.9	55.0
0°-60°	2490.5	86.2
0°-90°	2888.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2888.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1471	1471	1471	1471	1471	
5°	1446	1444	1444	1442	1442	137
15°	1352	1352	1338	1325	1320	380
25°	1172	1165	1146	1106	1075	538
35°	951	944	898	830	810	594
45°	730	714	653	599	575	562
55°	507	492	446	393	372	455
65°	301	284	257	262	218	297
75°	121	112	105	100	110	129
85°	17	19	20	22	24	24
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1471.1	1471.1	1471.1	1471.1	1471.1
2.5°	1460.9	1460.9	1460.9	1459.2	1459.2
5°	1445.6	1443.9	1443.9	1442.2	1442.2
7.5°	1433.7	1432.0	1430.3	1428.6	1425.2
10°	1416.7	1416.7	1415.0	1406.5	1404.8
12.5°	1389.5	1387.8	1381.0	1369.1	1365.7
15°	1352.1	1352.1	1338.5	1324.8	1319.7
17.5°	1311.2	1309.5	1292.5	1278.9	1272.1
20°	1267.0	1263.6	1246.6	1224.5	1212.6
22.5°	1217.7	1217.7	1197.3	1168.4	1156.5
25°	1171.8	1165.0	1146.3	1105.5	1074.8
27.5°	1119.1	1108.9	1088.5	1030.6	994.9
30°	1061.2	1056.1	1027.2	952.4	925.2
32.5°	1006.8	998.3	967.7	889.5	867.4
35°	950.7	943.9	898.0	829.9	809.5
37.5°	894.6	886.1	828.2	773.8	748.3
40°	838.4	828.2	765.3	716.0	688.8
42.5°	785.7	772.1	710.9	658.2	627.6
45°	729.6	714.3	653.1	598.6	574.8
47.5°	673.5	659.9	603.7	547.6	520.4
50°	614.0	602.0	551.0	494.9	466.0
52.5°	564.6	545.9	496.6	440.5	416.7
55°	506.8	491.5	445.6	392.9	372.5
57.5°	454.1	438.8	396.3	346.9	329.9
60°	404.8	382.7	346.9	304.4	290.8
62.5°	350.3	333.3	302.7	267.0	284.0
65°	301.0	284.0	256.8	261.9	217.7
67.5°	246.6	238.1	214.3	190.5	183.7
70°	200.7	190.5	182.0	156.5	149.7
72.5°	159.9	149.7	137.8	124.2	119.0
75°	120.7	112.2	105.4	100.3	110.5
77.5°	83.3	79.9	74.8	69.7	68.0
80°	54.4	52.7	51.0	49.3	47.6
82.5°	32.3	32.3	32.3	32.3	32.3
85°	17.0	18.7	20.4	22.1	23.8
87.5°	10.2	10.2	11.9	13.6	15.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)