

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: P562774

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-82-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562774
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-LD4-2LO-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: 4313.0 lumens
Efficiency: N/A
Efficacy: 92.2 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

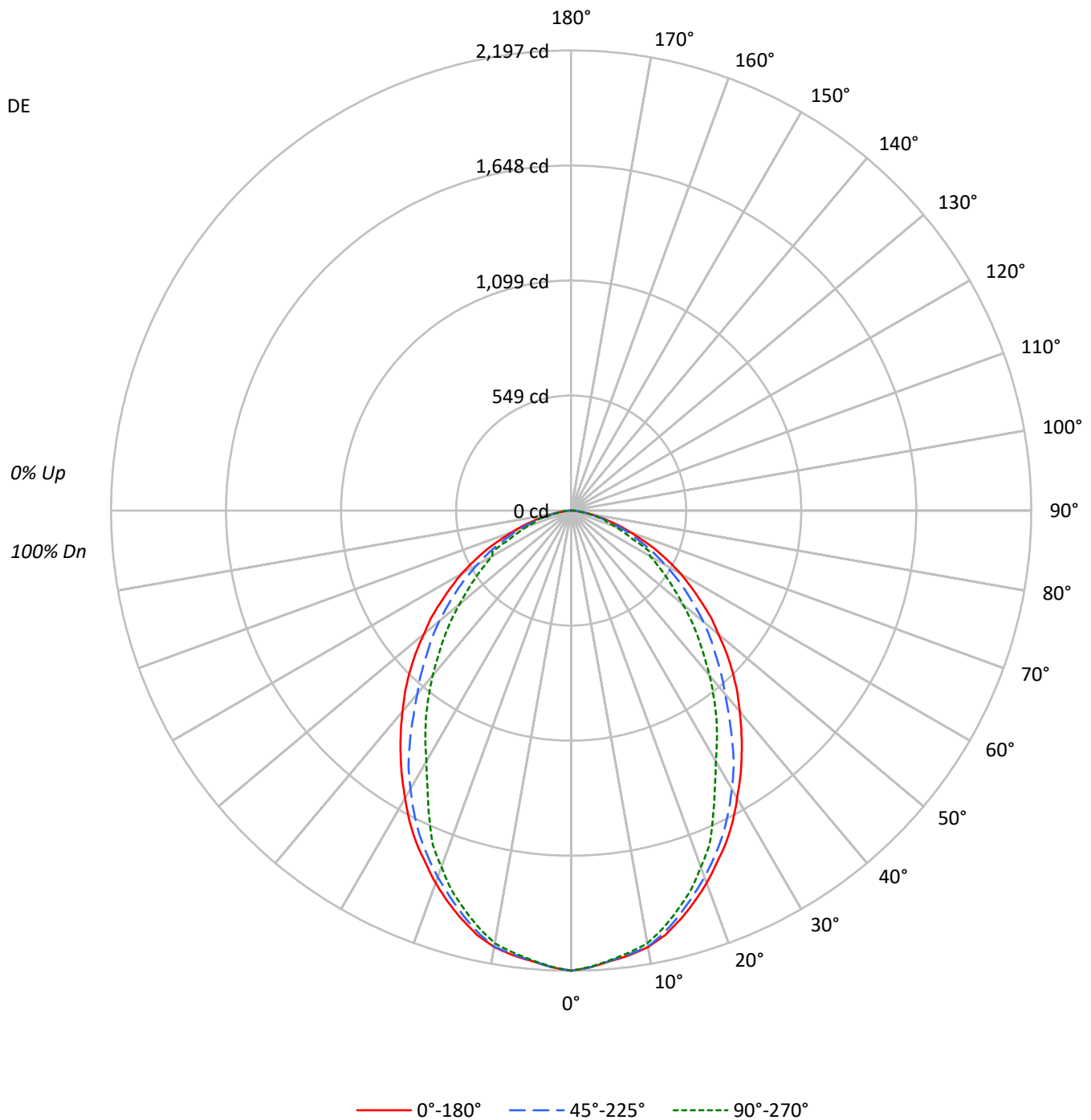
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2956	2956	2956
5°	2916	2912	2909
10°	2891	2887	2866
15°	2813	2784	2745
20°	2709	2666	2593
25°	2598	2541	2383
30°	2462	2383	2147
35°	2332	2203	1986
40°	2199	2007	1807
45°	2073	1856	1634
50°	1919	1723	1457
55°	1776	1561	1305
60°	1627	1394	1169
65°	1431	1221	1035
70°	1179	1069	879
75°	937	819	858
80°	630	590	551
85°	392	471	550

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2073 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.5	4.7
10°-20°	561.3	13.0
20°-30°	777.0	18.0
30°-40°	828.5	19.2
40°-50°	755.9	17.5
50°-60°	592.1	13.7
60°-70°	385.9	8.9
70°-80°	171.0	4.0
80°-90°	36.7	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°	1542.8	35.8
0°-40°	2371.3	55.0
0°-60°	3719.3	86.2
0°-90°	4313.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4313.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2197	2197	2197	2197	2197	
5°	2159	2156	2156	2154	2154	205
15°	2019	2019	1999	1979	1971	568
25°	1750	1740	1712	1651	1605	803
35°	1420	1410	1341	1240	1209	888
45°	1090	1067	975	894	858	839
55°	757	734	665	587	556	679
65°	450	424	384	391	325	443
75°	180	168	158	150	165	193
85°	25	28	30	33	36	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2197.0	2197.0	2197.0	2197.0	2197.0
2.5°	2181.7	2181.7	2181.7	2179.2	2179.2
5°	2158.9	2156.3	2156.3	2153.8	2153.8
7.5°	2141.1	2138.6	2136.0	2133.5	2128.4
10°	2115.7	2115.7	2113.2	2100.5	2097.9
12.5°	2075.1	2072.5	2062.4	2044.6	2039.5
15°	2019.2	2019.2	1998.9	1978.6	1970.9
17.5°	1958.2	1955.7	1930.3	1910.0	1899.8
20°	1892.2	1887.1	1861.7	1828.7	1810.9
22.5°	1818.5	1818.5	1788.1	1744.9	1727.1
25°	1750.0	1739.8	1711.9	1650.9	1605.2
27.5°	1671.2	1656.0	1625.5	1539.2	1485.8
30°	1584.9	1577.3	1534.1	1422.3	1381.7
32.5°	1503.6	1490.9	1445.2	1328.4	1295.3
35°	1419.8	1409.6	1341.0	1239.5	1209.0
37.5°	1336.0	1323.3	1236.9	1155.6	1117.5
40°	1252.2	1236.9	1142.9	1069.3	1028.6
42.5°	1173.4	1153.1	1061.7	982.9	937.2
45°	1089.6	1066.7	975.3	894.0	858.5
47.5°	1005.8	985.5	901.7	817.8	777.2
50°	916.9	899.1	822.9	739.1	695.9
52.5°	843.2	815.3	741.6	657.8	622.3
55°	756.9	734.0	665.4	586.7	556.2
57.5°	678.1	655.3	591.8	518.1	492.7
60°	604.5	571.5	518.1	454.6	434.3
62.5°	523.2	497.8	452.1	398.8	424.2
65°	449.6	424.2	383.5	391.1	325.1
67.5°	368.3	355.6	320.0	284.5	274.3
70°	299.7	284.5	271.8	233.7	223.5
72.5°	238.7	223.5	205.7	185.4	177.8
75°	180.3	167.6	157.5	149.9	165.1
77.5°	124.5	119.4	111.8	104.1	101.6
80°	81.3	78.7	76.2	73.7	71.1
82.5°	48.3	48.3	48.3	48.3	48.3
85°	25.4	27.9	30.5	33.0	35.6
87.5°	15.2	15.2	17.8	20.3	22.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)