

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: P562857

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-93-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562857
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-50-UNV-93-88-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5065.0 lumens
Efficiency: N/A
Efficacy: 108.2 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

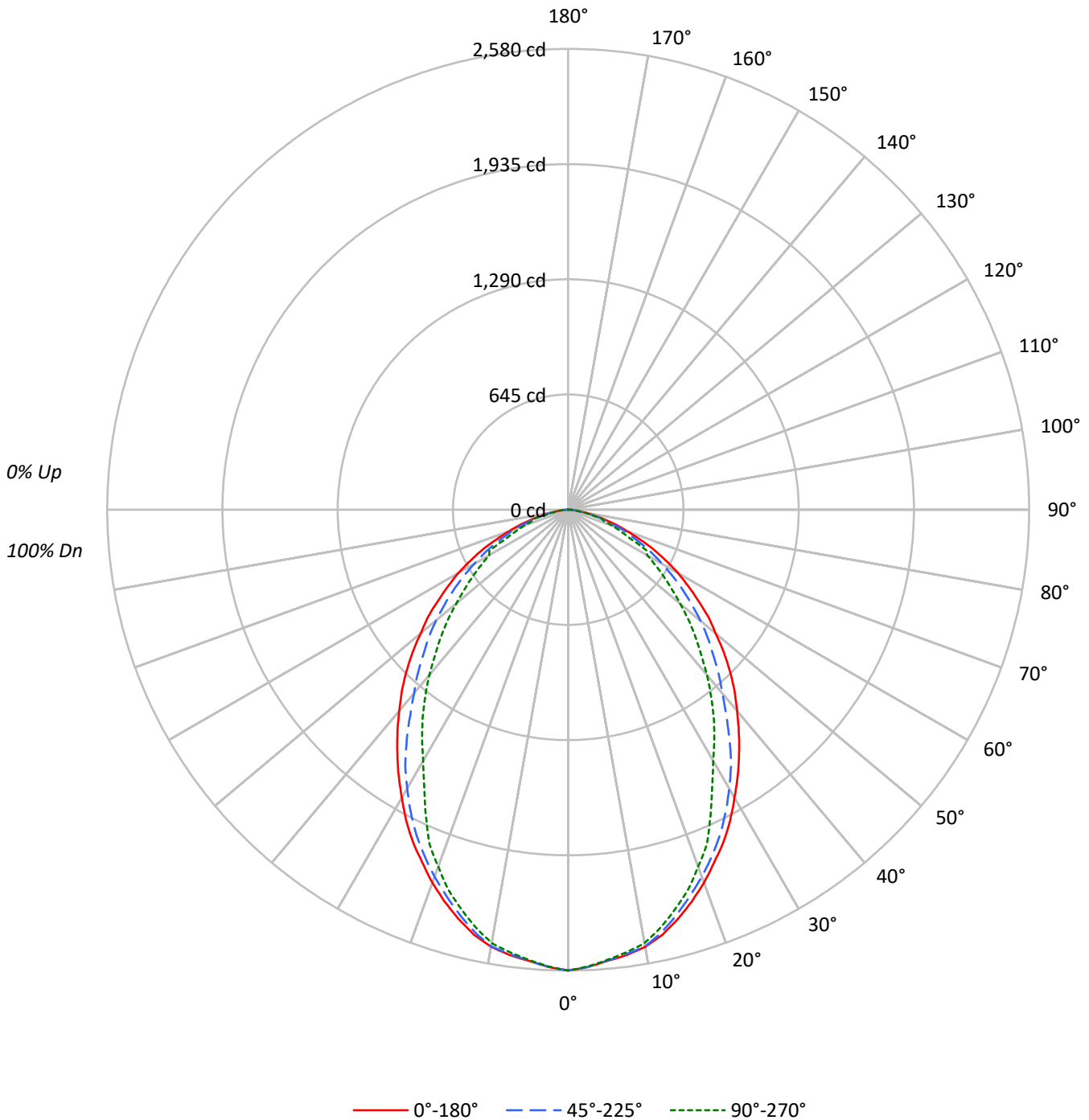
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3471	3471	3471
5°	3424	3420	3416
10°	3395	3390	3366
15°	3303	3270	3224
20°	3182	3130	3045
25°	3051	2984	2799
30°	2892	2799	2521
35°	2739	2587	2332
40°	2583	2357	2122
45°	2435	2179	1918
50°	2254	2023	1711
55°	2085	1833	1532
60°	1910	1637	1372
65°	1681	1434	1216
70°	1385	1255	1033
75°	1101	961	1008
80°	739	693	647
85°	460	553	645

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2435 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	240.2	4.7
10°-20°	659.1	13.0
20°-30°	912.5	18.0
30°-40°	973.0	19.2
40°-50°	887.7	17.5
50°-60°	695.4	13.7
60°-70°	453.2	8.9
70°-80°	200.8	4.0
80°-90°	43.1	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°	1811.8	35.8
0°-40°	2784.8	55.0
0°-60°	4367.9	86.2
0°-90°	5065.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5065.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2580	2580	2580	2580	2580	
5°	2535	2532	2532	2529	2529	241
15°	2371	2371	2347	2324	2315	667
25°	2055	2043	2010	1939	1885	943
35°	1667	1655	1575	1456	1420	1042
45°	1280	1253	1145	1050	1008	986
55°	889	862	782	689	653	797
65°	528	498	450	459	382	520
75°	212	197	185	176	194	227
85°	30	33	36	39	42	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2580.0	2580.0	2580.0	2580.0	2580.0
2.5°	2562.1	2562.1	2562.1	2559.2	2559.2
5°	2535.3	2532.3	2532.3	2529.3	2529.3
7.5°	2514.4	2511.4	2508.5	2505.5	2499.5
10°	2484.6	2484.6	2481.6	2466.7	2463.7
12.5°	2436.9	2433.9	2422.0	2401.1	2395.1
15°	2371.3	2371.3	2347.4	2323.5	2314.6
17.5°	2299.7	2296.7	2266.9	2243.0	2231.1
20°	2222.1	2216.2	2186.3	2147.6	2126.7
22.5°	2135.6	2135.6	2099.8	2049.1	2028.2
25°	2055.1	2043.2	2010.3	1938.8	1885.1
27.5°	1962.6	1944.7	1908.9	1807.5	1744.9
30°	1861.2	1852.3	1801.6	1670.3	1622.6
32.5°	1765.8	1750.9	1697.2	1560.0	1521.2
35°	1667.3	1655.4	1574.9	1455.6	1419.8
37.5°	1568.9	1554.0	1452.6	1357.1	1312.4
40°	1470.5	1452.6	1342.2	1255.7	1208.0
42.5°	1378.0	1354.1	1246.8	1154.3	1100.6
45°	1279.6	1252.7	1145.4	1049.9	1008.2
47.5°	1181.2	1157.3	1058.9	960.4	912.7
50°	1076.8	1055.9	966.4	868.0	817.3
52.5°	990.3	957.4	871.0	772.5	730.8
55°	888.8	862.0	781.5	689.0	653.2
57.5°	796.4	769.5	695.0	608.5	578.6
60°	709.9	671.1	608.5	533.9	510.0
62.5°	614.4	584.6	530.9	468.3	498.1
65°	527.9	498.1	450.4	459.3	381.8
67.5°	432.5	417.6	375.8	334.1	322.1
70°	352.0	334.1	319.1	274.4	262.5
72.5°	280.4	262.5	241.6	217.7	208.8
75°	211.8	196.9	184.9	176.0	193.9
77.5°	146.2	140.2	131.2	122.3	119.3
80°	95.4	92.5	89.5	86.5	83.5
82.5°	56.7	56.7	56.7	56.7	56.7
85°	29.8	32.8	35.8	38.8	41.8
87.5°	17.9	17.9	20.9	23.9	26.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)