

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: P561846

Luminaire Tested: FSR-12-4-LD4-2STD-50-UNV-80-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561846
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-12-4-LD4-2STD-50-UNV-80-87-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5566.0 lumens
Efficiency: N/A
Efficacy: 83.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

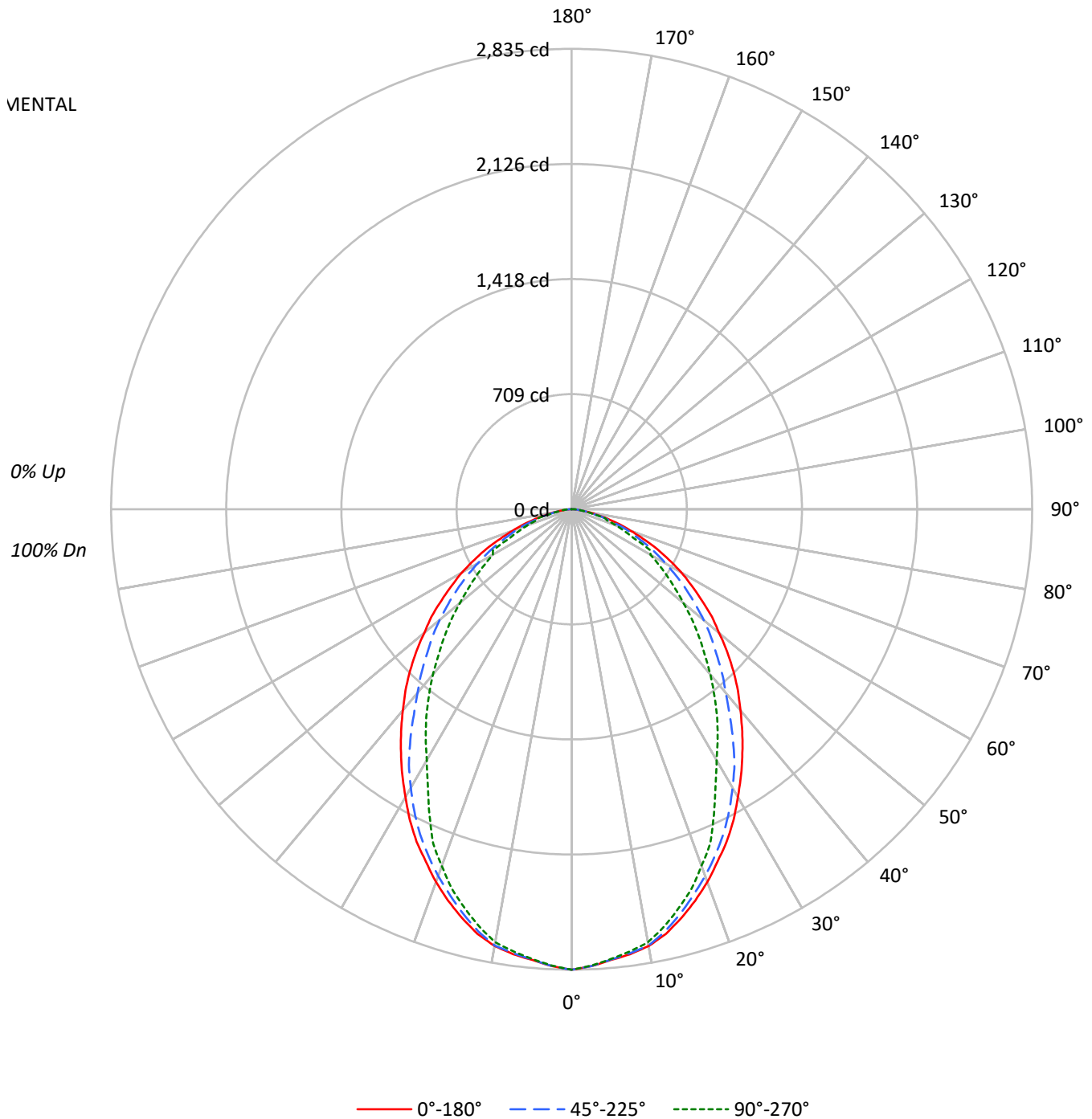
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7629	7629	7629
5°	7526	7517	7508
10°	7461	7452	7398
15°	7260	7187	7086
20°	6993	6880	6692
25°	6706	6559	6151
30°	6355	6152	5541
35°	6019	5685	5125
40°	5676	5181	4663
45°	5351	4790	4216
50°	4954	4446	3760
55°	4583	4029	3368
60°	4198	3599	3017
65°	3694	3151	2672
70°	3043	2759	2269
75°	2419	2113	2216
80°	1626	1523	1423
85°	1013	1213	1417

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5351 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	263.9	4.7
10°-20°	724.3	13.0
20°-30°	1002.8	18.0
30°-40°	1069.2	19.2
40°-50°	975.5	17.5
50°-60°	764.2	13.7
60°-70°	498.1	8.9
70°-80°	220.7	4.0
80°-90°	47.4	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°	1991.0	35.8
0°-40°	3060.2	55.0
0°-60°	4799.9	86.2
0°-90°	5566.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5566.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2835	2835	2835	2835	2835	
5°	2786	2783	2783	2780	2780	264
15°	2606	2606	2580	2553	2544	733
25°	2258	2245	2209	2130	2072	1037
35°	1832	1819	1731	1600	1560	1145
45°	1406	1377	1259	1154	1108	1083
55°	977	947	859	757	718	876
65°	580	547	495	505	420	572
75°	233	216	203	193	213	249
85°	33	36	39	43	46	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2835.2	2835.2	2835.2	2835.2	2835.2
2.5°	2815.6	2815.6	2815.6	2812.3	2812.3
5°	2786.1	2782.8	2782.8	2779.5	2779.5
7.5°	2763.1	2759.9	2756.6	2753.3	2746.7
10°	2730.4	2730.4	2727.1	2710.7	2707.4
12.5°	2677.9	2674.6	2661.5	2638.6	2632.0
15°	2605.8	2605.8	2579.6	2553.4	2543.5
17.5°	2527.1	2523.9	2491.1	2464.9	2451.8
20°	2441.9	2435.4	2402.6	2360.0	2337.0
22.5°	2346.9	2346.9	2307.5	2251.8	2228.9
25°	2258.4	2245.3	2209.2	2130.5	2071.5
27.5°	2156.8	2137.1	2097.8	1986.3	1917.5
30°	2045.3	2035.5	1979.8	1835.5	1783.1
32.5°	1940.4	1924.0	1865.0	1714.3	1671.6
35°	1832.3	1819.1	1730.6	1599.5	1560.2
37.5°	1724.1	1707.7	1596.3	1491.4	1442.2
40°	1615.9	1596.3	1475.0	1379.9	1327.5
42.5°	1514.3	1488.1	1370.1	1268.5	1209.5
45°	1406.2	1376.7	1258.7	1153.8	1107.9
47.5°	1298.0	1271.8	1163.6	1055.4	1003.0
50°	1183.3	1160.3	1062.0	953.8	898.1
52.5°	1088.2	1052.2	957.1	848.9	803.0
55°	976.8	947.3	858.8	757.2	717.8
57.5°	875.2	845.7	763.7	668.7	635.9
60°	780.1	737.5	668.7	586.7	560.5
62.5°	675.2	642.4	583.4	514.6	547.4
65°	580.2	547.4	494.9	504.8	419.6
67.5°	475.3	458.9	413.0	367.1	354.0
70°	386.8	367.1	350.7	301.6	288.4
72.5°	308.1	288.4	265.5	239.3	229.4
75°	232.7	216.3	203.2	193.4	213.1
77.5°	160.6	154.1	144.2	134.4	131.1
80°	104.9	101.6	98.3	95.1	91.8
82.5°	62.3	62.3	62.3	62.3	62.3
85°	32.8	36.1	39.3	42.6	45.9
87.5°	19.7	19.7	22.9	26.2	29.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)