

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: P563007

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-80-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563007
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-LD4-2STD-50-UNV-80-97-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7661.0 lumens
Efficiency: N/A
Efficacy: 115.0 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

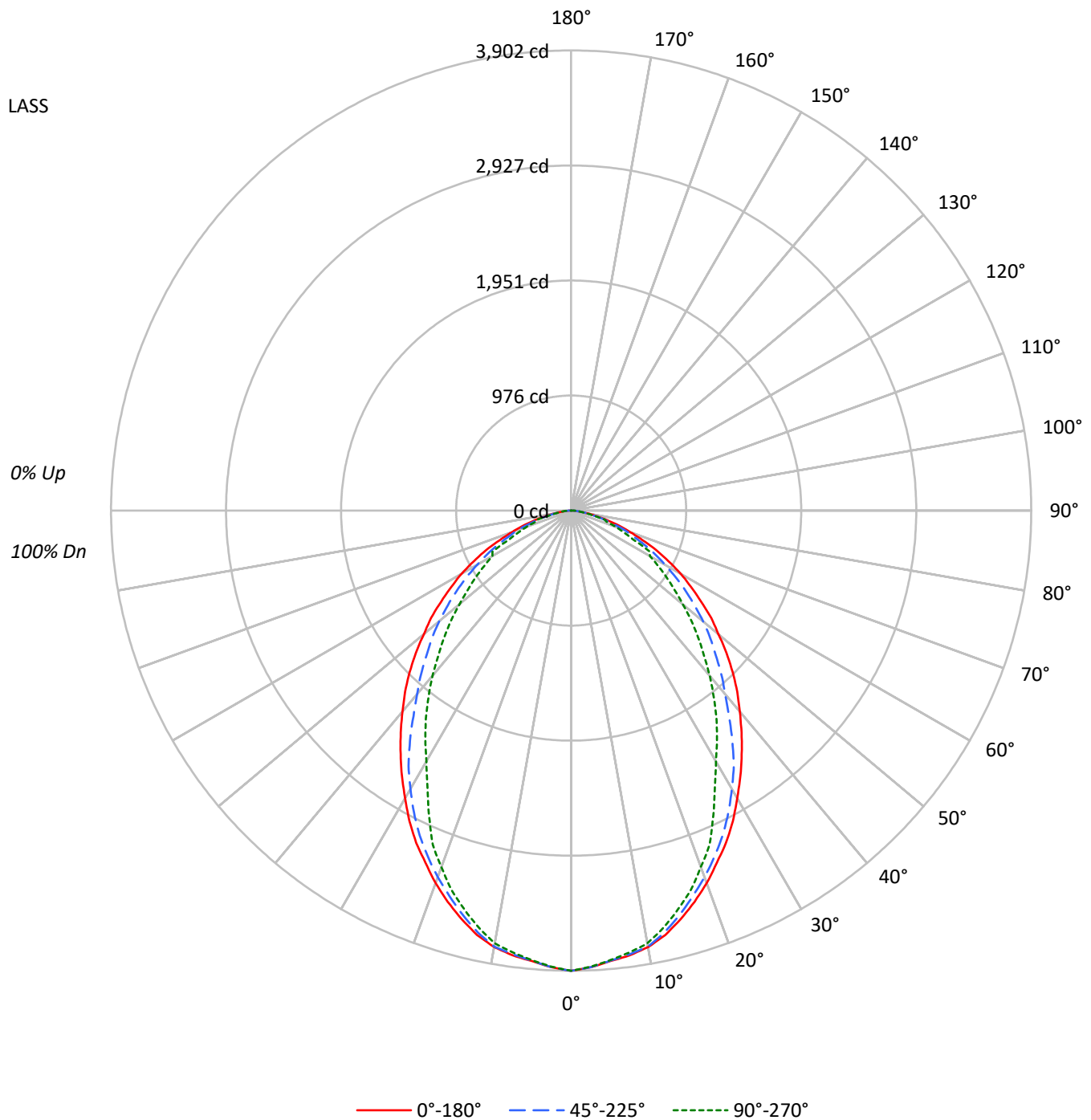
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5251	5251	5251
5°	5179	5173	5167
10°	5134	5128	5091
15°	4996	4946	4877
20°	4812	4735	4606
25°	4615	4514	4233
30°	4374	4234	3813
35°	4142	3913	3527
40°	3906	3566	3209
45°	3683	3296	2902
50°	3409	3060	2587
55°	3154	2773	2318
60°	2889	2477	2076
65°	2542	2169	1839
70°	2094	1899	1562
75°	1665	1454	1524
80°	1119	1048	979
85°	696	835	976

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3683 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	363.3	4.7
10°-20°	996.9	13.0
20°-30°	1380.2	18.0
30°-40°	1471.7	19.2
40°-50°	1342.6	17.5
50°-60°	1051.8	13.7
60°-70°	685.5	8.9
70°-80°	303.7	4.0
80°-90°	65.2	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°	2740.4	35.8
0°-40°	4212.1	55.0
0°-60°	6606.5	86.2
0°-90°	7661.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7661.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3902	3902	3902	3902	3902	
5°	3835	3830	3830	3826	3826	364
15°	3587	3587	3550	3514	3501	1008
25°	3108	3090	3041	2932	2851	1427
35°	2522	2504	2382	2202	2148	1577
45°	1935	1895	1732	1588	1525	1491
55°	1344	1304	1182	1042	988	1206
65°	798	753	681	695	578	787
75°	320	298	280	266	293	343
85°	45	50	54	59	63	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3902.4	3902.4	3902.4	3902.4	3902.4
2.5°	3875.3	3875.3	3875.3	3870.8	3870.8
5°	3834.7	3830.2	3830.2	3825.7	3825.7
7.5°	3803.2	3798.6	3794.1	3789.6	3780.6
10°	3758.0	3758.0	3753.5	3731.0	3726.5
12.5°	3685.9	3681.3	3663.3	3631.7	3622.7
15°	3586.6	3586.6	3550.5	3514.4	3500.9
17.5°	3478.3	3473.8	3428.7	3392.6	3374.6
20°	3361.0	3352.0	3306.9	3248.2	3216.7
22.5°	3230.2	3230.2	3176.1	3099.4	3067.8
25°	3108.4	3090.3	3040.7	2932.4	2851.2
27.5°	2968.5	2941.5	2887.3	2733.9	2639.2
30°	2815.1	2801.6	2724.9	2526.4	2454.2
32.5°	2670.8	2648.2	2567.0	2359.5	2300.8
35°	2521.9	2503.9	2382.0	2201.6	2147.5
37.5°	2373.0	2350.5	2197.1	2052.7	1985.0
40°	2224.1	2197.1	2030.2	1899.3	1827.1
42.5°	2084.3	2048.2	1885.8	1745.9	1664.7
45°	1935.4	1894.8	1732.4	1588.0	1524.9
47.5°	1786.5	1750.4	1601.6	1452.7	1380.5
50°	1628.6	1597.1	1461.7	1312.8	1236.1
52.5°	1497.8	1448.2	1317.3	1168.5	1105.3
55°	1344.4	1303.8	1182.0	1042.1	988.0
57.5°	1204.6	1164.0	1051.2	920.3	875.2
60°	1073.7	1015.1	920.3	807.6	771.5
62.5°	929.4	884.2	803.0	708.3	753.4
65°	798.5	753.4	681.2	694.8	577.5
67.5°	654.2	631.6	568.4	505.3	487.2
70°	532.4	505.3	482.7	415.1	397.0
72.5°	424.1	397.0	365.4	329.3	315.8
75°	320.3	297.8	279.7	266.2	293.2
77.5°	221.1	212.0	198.5	185.0	180.5
80°	144.4	139.9	135.3	130.8	126.3
82.5°	85.7	85.7	85.7	85.7	85.7
85°	45.1	49.6	54.1	58.6	63.2
87.5°	27.1	27.1	31.6	36.1	40.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)