

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: P561459

Luminaire Tested: FSR-12-4-LD4-2HI-50-UNV-80-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561459
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-LD4-2HI-50-UNV-80-85-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8203.0 lumens
Efficiency: N/A
Efficacy: 94.9 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

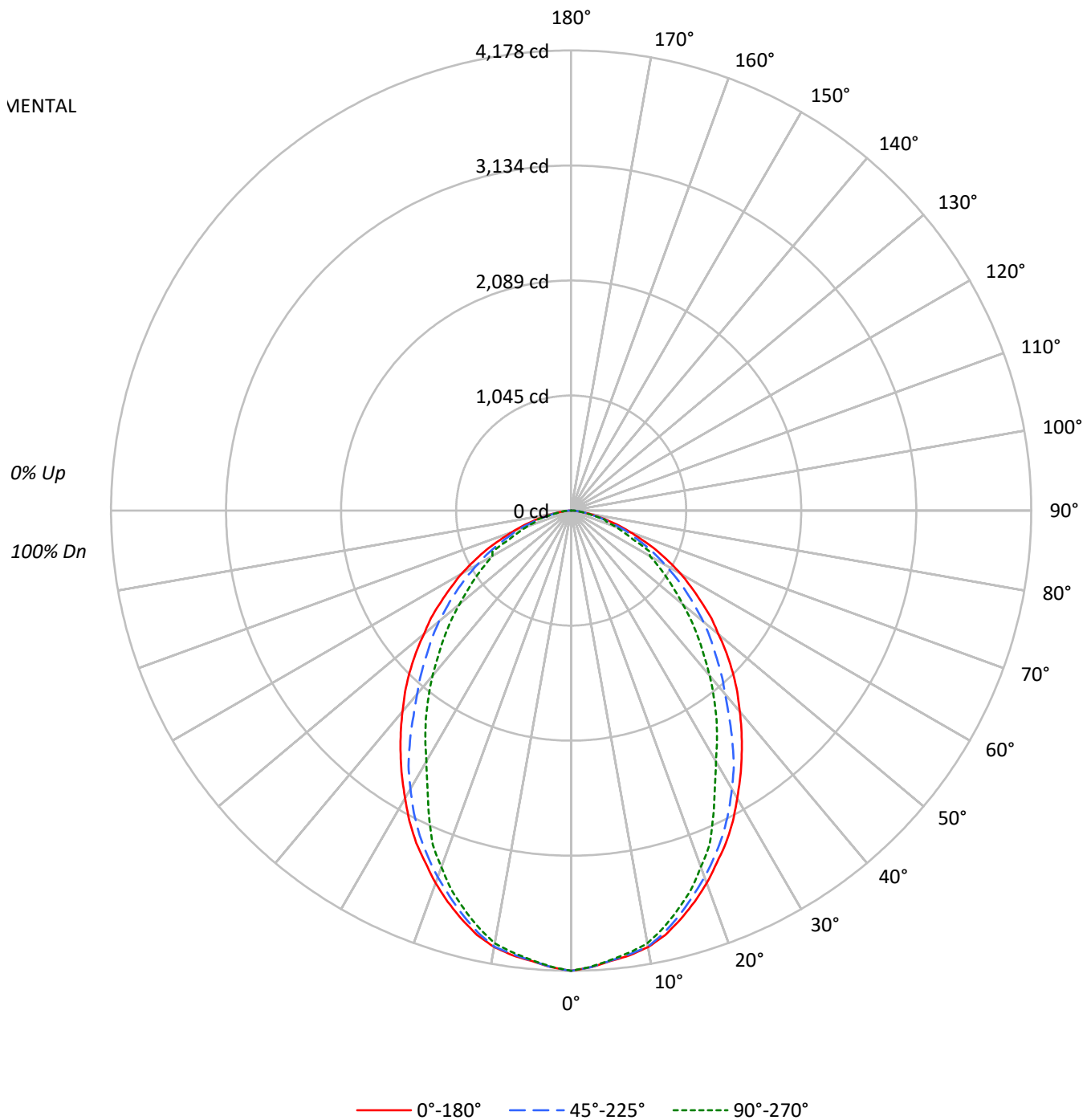
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	11244	11244	11244
5°	11091	11078	11065
10°	10995	10982	10903
15°	10699	10591	10443
20°	10306	10140	9863
25°	9882	9667	9065
30°	9366	9066	8166
35°	8871	8379	7554
40°	8366	7636	6872
45°	7886	7059	6214
50°	7301	6552	5541
55°	6754	5938	4963
60°	6188	5303	4445
65°	5444	4644	3937
70°	4485	4067	3345
75°	3566	3114	3265
80°	2396	2245	2097
85°	1491	1791	2087

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7886 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	389.0	4.7
10°-20°	1067.5	13.0
20°-30°	1477.8	18.0
30°-40°	1575.8	19.2
40°-50°	1437.6	17.5
50°-60°	1126.2	13.7
60°-70°	734.0	8.9
70°-80°	325.2	4.0
80°-90°	69.8	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°	2934.3	35.8
0°-40°	4510.1	55.0
0°-60°	7073.9	86.2
0°-90°	8203.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8203.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4178	4178	4178	4178	4178	
5°	4106	4101	4101	4096	4096	390
15°	3840	3840	3802	3763	3749	1080
25°	3328	3309	3256	3140	3053	1528
35°	2700	2681	2551	2357	2299	1688
45°	2072	2029	1855	1700	1633	1596
55°	1440	1396	1266	1116	1058	1291
65°	855	807	729	744	618	843
75°	343	319	300	285	314	368
85°	48	53	58	63	68	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4178.5	4178.5	4178.5	4178.5	4178.5
2.5°	4149.5	4149.5	4149.5	4144.7	4144.7
5°	4106.0	4101.2	4101.2	4096.4	4096.4
7.5°	4072.2	4067.4	4062.6	4057.7	4048.1
10°	4023.9	4023.9	4019.1	3994.9	3990.1
12.5°	3946.6	3941.8	3922.5	3888.7	3879.0
15°	3840.4	3840.4	3801.7	3763.1	3748.6
17.5°	3724.4	3719.6	3671.3	3632.6	3613.3
20°	3598.8	3589.2	3540.9	3478.1	3444.2
22.5°	3458.7	3458.7	3400.8	3318.6	3284.8
25°	3328.3	3309.0	3255.8	3139.9	3053.0
27.5°	3178.6	3149.6	3091.6	2927.4	2825.9
30°	3014.3	2999.8	2917.7	2705.2	2627.9
32.5°	2859.7	2835.6	2748.6	2526.4	2463.6
35°	2700.3	2681.0	2550.6	2357.3	2299.4
37.5°	2540.9	2516.8	2352.5	2197.9	2125.5
40°	2381.5	2352.5	2173.8	2033.7	1956.4
42.5°	2231.8	2193.1	2019.2	1869.5	1782.5
45°	2072.3	2028.9	1855.0	1700.4	1632.8
47.5°	1912.9	1874.3	1714.9	1555.5	1478.2
50°	1743.9	1710.0	1565.1	1405.7	1323.6
52.5°	1603.8	1550.6	1410.5	1251.1	1183.5
55°	1439.5	1396.1	1265.6	1115.9	1057.9
57.5°	1289.8	1246.3	1125.5	985.4	937.1
60°	1149.7	1086.9	985.4	864.7	826.0
62.5°	995.1	946.8	859.9	758.4	806.7
65°	855.0	806.7	729.4	743.9	618.3
67.5°	700.4	676.3	608.7	541.0	521.7
70°	570.0	541.0	516.9	444.4	425.1
72.5°	454.1	425.1	391.3	352.6	338.1
75°	343.0	318.8	299.5	285.0	314.0
77.5°	236.7	227.0	212.5	198.1	193.2
80°	154.6	149.7	144.9	140.1	135.3
82.5°	91.8	91.8	91.8	91.8	91.8
85°	48.3	53.1	58.0	62.8	67.6
87.5°	29.0	29.0	33.8	38.6	43.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)