

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: P561981

Luminaire Tested: FSR-24-4-LD4-1HI-35-UNV-80-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561981
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-LD4-1HI-35-UNV-80-96-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4745.0 lumens
Efficiency: N/A
Efficacy: 109.8 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

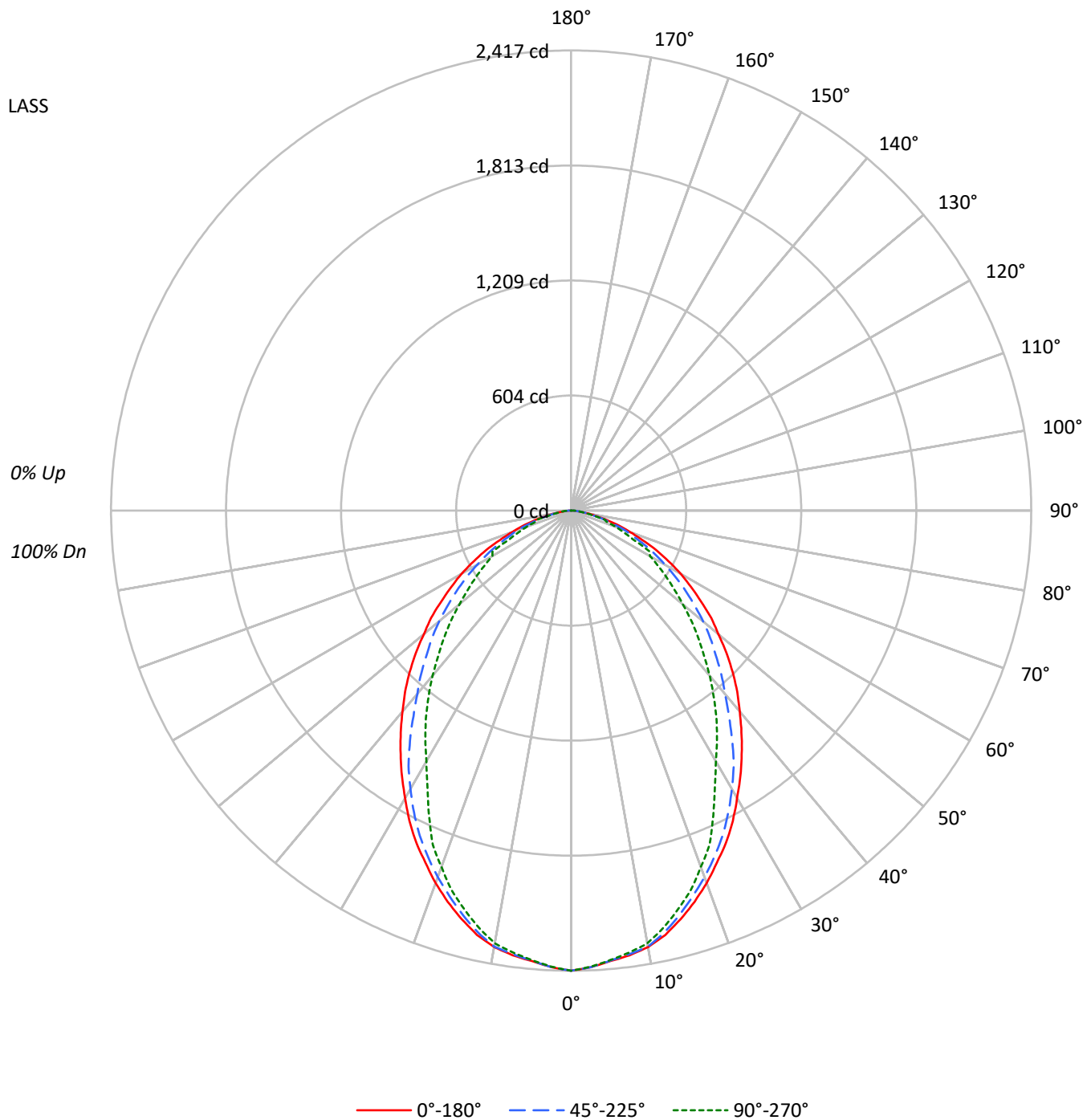
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	3252	3252	3252
5°	3208	3204	3200
10°	3180	3176	3153
15°	3094	3063	3020
20°	2981	2933	2853
25°	2858	2796	2622
30°	2709	2622	2362
35°	2566	2423	2185
40°	2420	2209	1988
45°	2281	2042	1797
50°	2111	1895	1603
55°	1953	1717	1435
60°	1790	1534	1286
65°	1575	1343	1139
70°	1297	1176	967
75°	1031	900	944
80°	693	649	606
85°	431	517	604

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2281 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	225.0	4.7
10°-20°	617.5	13.0
20°-30°	854.9	18.0
30°-40°	911.5	19.2
40°-50°	831.6	17.5
50°-60°	651.5	13.7
60°-70°	424.6	8.9
70°-80°	188.1	4.0
80°-90°	40.4	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°	1697.3	35.8
0°-40°	2608.8	55.0
0°-60°	4091.9	86.2
0°-90°	4745.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4745.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2417	2417	2417	2417	2417	
5°	2375	2372	2372	2370	2370	225
15°	2221	2221	2199	2177	2168	625
25°	1925	1914	1883	1816	1766	884
35°	1562	1551	1475	1364	1330	977
45°	1199	1174	1073	984	944	923
55°	833	808	732	646	612	747
65°	495	467	422	430	358	487
75°	198	184	173	165	182	213
85°	28	31	34	36	39	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2417.0	2417.0	2417.0	2417.0	2417.0
2.5°	2400.3	2400.3	2400.3	2397.5	2397.5
5°	2375.1	2372.3	2372.3	2369.5	2369.5
7.5°	2355.6	2352.8	2350.0	2347.2	2341.6
10°	2327.6	2327.6	2324.8	2310.9	2308.1
12.5°	2282.9	2280.1	2268.9	2249.4	2243.8
15°	2221.4	2221.4	2199.1	2176.7	2168.3
17.5°	2154.4	2151.6	2123.6	2101.3	2090.1
20°	2081.7	2076.1	2048.2	2011.9	1992.3
22.5°	2000.7	2000.7	1967.2	1919.7	1900.1
25°	1925.2	1914.1	1883.3	1816.3	1766.0
27.5°	1838.6	1821.9	1788.3	1693.3	1634.6
30°	1743.6	1735.2	1687.7	1564.8	1520.1
32.5°	1654.2	1640.2	1589.9	1461.4	1425.1
35°	1562.0	1550.8	1475.4	1363.6	1330.1
37.5°	1469.8	1455.8	1360.8	1271.4	1229.5
40°	1377.6	1360.8	1257.4	1176.4	1131.7
42.5°	1291.0	1268.6	1168.0	1081.4	1031.1
45°	1198.7	1173.6	1073.0	983.6	944.5
47.5°	1106.5	1084.2	992.0	899.8	855.0
50°	1008.7	989.2	905.3	813.1	765.6
52.5°	927.7	897.0	815.9	723.7	684.6
55°	832.7	807.5	732.1	645.5	611.9
57.5°	746.1	720.9	651.1	570.0	542.1
60°	665.0	628.7	570.0	500.2	477.8
62.5°	575.6	547.7	497.4	438.7	466.6
65°	494.6	466.6	421.9	430.3	357.7
67.5°	405.2	391.2	352.1	313.0	301.8
70°	329.7	313.0	299.0	257.1	245.9
72.5°	262.7	245.9	226.3	204.0	195.6
75°	198.4	184.4	173.2	164.9	181.6
77.5°	136.9	131.3	122.9	114.6	111.8
80°	89.4	86.6	83.8	81.0	78.2
82.5°	53.1	53.1	53.1	53.1	53.1
85°	27.9	30.7	33.5	36.3	39.1
87.5°	16.8	16.8	19.6	22.4	25.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)