

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: P562043

Luminaire Tested: FSR-24-4-LD4-1HI-40-UNV-80-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562043
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-40-UNV-80-94-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4846.0 lumens
Efficiency: N/A
Efficacy: 112.2 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

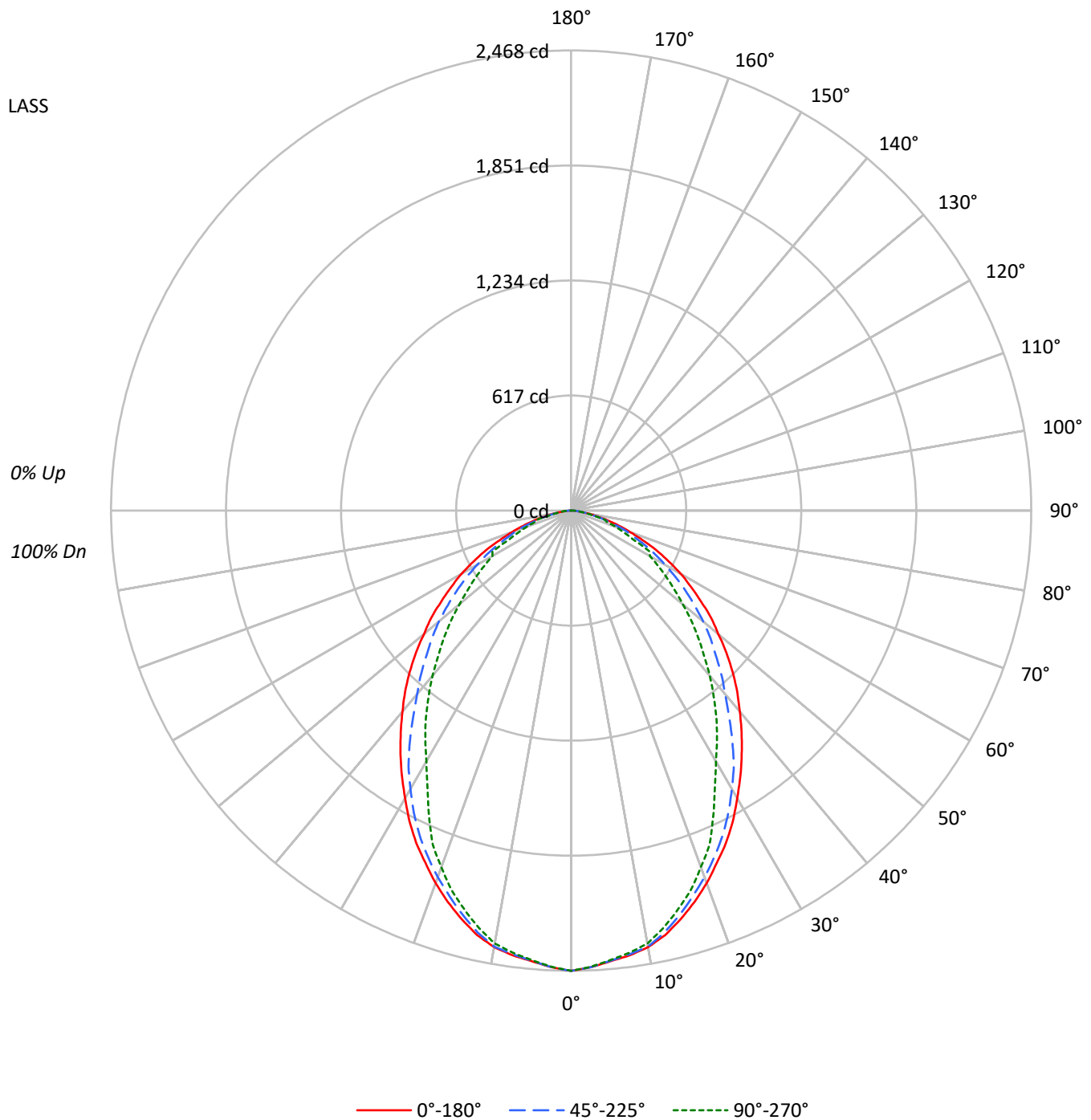
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3321	3321	3321
5°	3276	3272	3269
10°	3248	3244	3221
15°	3160	3128	3085
20°	3044	2995	2913
25°	2919	2855	2678
30°	2767	2678	2412
35°	2620	2475	2231
40°	2471	2256	2030
45°	2330	2085	1835
50°	2156	1935	1637
55°	1995	1754	1466
60°	1828	1567	1313
65°	1608	1372	1163
70°	1325	1201	988
75°	1053	920	964
80°	707	663	619
85°	440	528	618

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2330 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.8	4.7
10°-20°	630.6	13.0
20°-30°	873.0	18.0
30°-40°	930.9	19.2
40°-50°	849.3	17.5
50°-60°	665.3	13.7
60°-70°	433.6	8.9
70°-80°	192.1	4.0
80°-90°	41.2	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°	1733.4	35.8
0°-40°	2664.4	55.0
0°-60°	4179.0	86.2
0°-90°	4846.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4846.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2468	2468	2468	2468	2468	
5°	2426	2423	2423	2420	2420	230
15°	2269	2269	2246	2223	2214	638
25°	1966	1955	1923	1855	1804	903
35°	1595	1584	1507	1393	1358	997
45°	1224	1199	1096	1004	965	943
55°	850	825	748	659	625	763
65°	505	477	431	440	365	498
75°	203	188	177	168	186	217
85°	28	31	34	37	40	40
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2468.5	2468.5	2468.5	2468.5	2468.5
2.5°	2451.4	2451.4	2451.4	2448.5	2448.5
5°	2425.7	2422.8	2422.8	2420.0	2420.0
7.5°	2405.7	2402.9	2400.0	2397.1	2391.4
10°	2377.2	2377.2	2374.3	2360.0	2357.2
12.5°	2331.5	2328.7	2317.2	2297.3	2291.6
15°	2268.7	2268.7	2245.9	2223.1	2214.5
17.5°	2200.2	2197.4	2168.8	2146.0	2134.6
20°	2126.0	2120.3	2091.8	2054.7	2034.7
22.5°	2043.3	2043.3	2009.0	1960.5	1940.5
25°	1966.2	1954.8	1923.4	1854.9	1803.6
27.5°	1877.8	1860.6	1826.4	1729.4	1669.4
30°	1780.7	1772.2	1723.7	1598.1	1552.4
32.5°	1689.4	1675.1	1623.8	1492.5	1455.4
35°	1595.2	1583.8	1506.8	1392.6	1358.4
37.5°	1501.1	1486.8	1389.8	1298.5	1255.6
40°	1406.9	1389.8	1284.2	1201.4	1155.8
42.5°	1318.4	1295.6	1192.9	1104.4	1053.0
45°	1224.3	1198.6	1095.8	1004.5	964.6
47.5°	1130.1	1107.3	1013.1	918.9	873.2
50°	1030.2	1010.2	924.6	830.4	781.9
52.5°	947.4	916.1	833.3	739.1	699.2
55°	850.4	824.7	747.7	659.2	625.0
57.5°	761.9	736.3	664.9	582.2	553.6
60°	679.2	642.1	582.2	510.8	488.0
62.5°	587.9	559.3	508.0	448.0	476.6
65°	505.1	476.6	430.9	439.5	365.3
67.5°	413.8	399.5	359.6	319.6	308.2
70°	336.7	319.6	305.4	262.5	251.1
72.5°	268.3	251.1	231.2	208.3	199.8
75°	202.6	188.3	176.9	168.4	185.5
77.5°	139.8	134.1	125.6	117.0	114.1
80°	91.3	88.5	85.6	82.8	79.9
82.5°	54.2	54.2	54.2	54.2	54.2
85°	28.5	31.4	34.2	37.1	40.0
87.5°	17.1	17.1	20.0	22.8	25.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)