

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: P560959

Luminaire Tested: FSR-12-4-LD4-1LO-35-UNV-80-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560959
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-LD4-1LO-35-UNV-80-97-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 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: 2370.0 lumens
Efficiency: N/A
Efficacy: 101.3 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

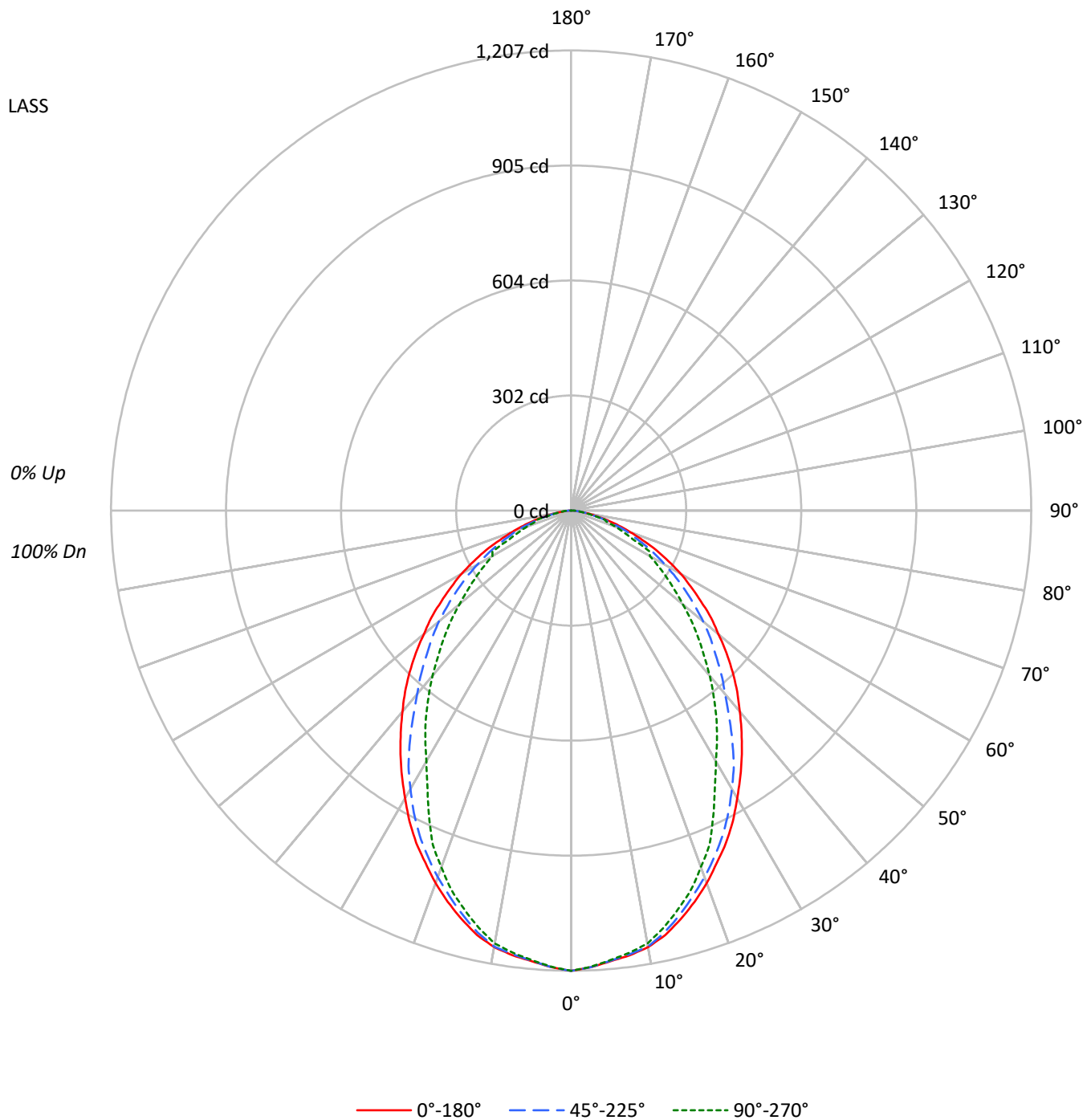
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3249	3249	3249
5°	3205	3201	3197
10°	3177	3173	3150
15°	3091	3060	3017
20°	2978	2930	2850
25°	2855	2793	2619
30°	2706	2619	2359
35°	2563	2421	2182
40°	2417	2206	1985
45°	2278	2039	1795
50°	2109	1893	1601
55°	1951	1716	1434
60°	1788	1532	1285
65°	1573	1342	1137
70°	1296	1175	966
75°	1030	899	943
80°	693	649	606
85°	432	516	602

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2278 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.4	4.7
10°-20°	308.4	13.0
20°-30°	427.0	18.0
30°-40°	455.3	19.2
40°-50°	415.3	17.5
50°-60°	325.4	13.7
60°-70°	212.1	8.9
70°-80°	93.9	4.0
80°-90°	20.2	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°	847.8	35.8
0°-40°	1303.1	55.0
0°-60°	2043.8	86.2
0°-90°	2370.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2370.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1207	1207	1207	1207	1207	
5°	1186	1185	1185	1184	1184	113
15°	1110	1110	1098	1087	1083	312
25°	962	956	941	907	882	441
35°	780	775	737	681	664	488
45°	599	586	536	491	472	461
55°	416	403	366	322	306	373
65°	247	233	211	215	179	243
75°	99	92	86	82	91	106
85°	14	15	17	18	20	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1207.2	1207.2	1207.2	1207.2	1207.2
2.5°	1198.9	1198.9	1198.9	1197.5	1197.5
5°	1186.3	1184.9	1184.9	1183.5	1183.5
7.5°	1176.5	1175.1	1173.8	1172.4	1169.6
10°	1162.6	1162.6	1161.2	1154.2	1152.8
12.5°	1140.3	1138.9	1133.3	1123.5	1120.7
15°	1109.6	1109.6	1098.4	1087.2	1083.0
17.5°	1076.1	1074.7	1060.7	1049.5	1044.0
20°	1039.8	1037.0	1023.0	1004.9	995.1
22.5°	999.3	999.3	982.5	958.8	949.0
25°	961.6	956.0	940.7	907.2	882.1
27.5°	918.3	910.0	893.2	845.8	816.5
30°	870.9	866.7	843.0	781.6	759.2
32.5°	826.2	819.3	794.1	729.9	711.8
35°	780.2	774.6	736.9	681.1	664.3
37.5°	734.1	727.1	679.7	635.0	614.1
40°	688.1	679.7	628.0	587.6	565.2
42.5°	644.8	633.6	583.4	540.1	515.0
45°	598.7	586.2	535.9	491.3	471.7
47.5°	552.7	541.5	495.5	449.4	427.1
50°	503.8	494.1	452.2	406.1	382.4
52.5°	463.4	448.0	407.5	361.5	341.9
55°	415.9	403.3	365.7	322.4	305.6
57.5°	372.6	360.1	325.2	284.7	270.8
60°	332.2	314.0	284.7	249.8	238.7
62.5°	287.5	273.5	248.4	219.1	233.1
65°	247.0	233.1	210.7	214.9	178.6
67.5°	202.4	195.4	175.9	156.3	150.7
70°	164.7	156.3	149.3	128.4	122.8
72.5°	131.2	122.8	113.0	101.9	97.7
75°	99.1	92.1	86.5	82.3	90.7
77.5°	68.4	65.6	61.4	57.2	55.8
80°	44.7	43.3	41.9	40.5	39.1
82.5°	26.5	26.5	26.5	26.5	26.5
85°	14.0	15.4	16.7	18.1	19.5
87.5°	8.4	8.4	9.8	11.2	12.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)