

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: P562493

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-80-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562493
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-LD4-2HI-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

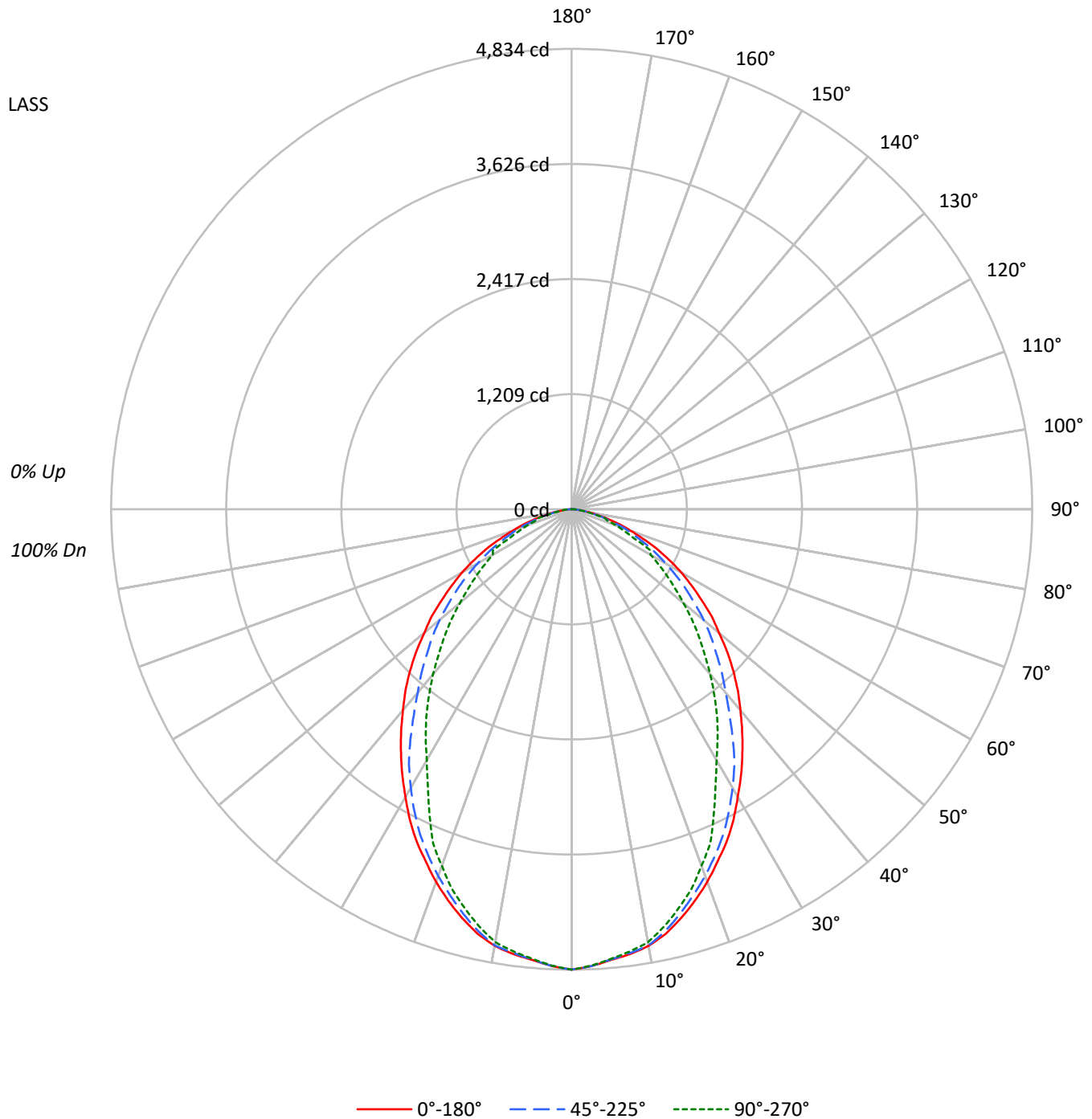
Lumens per Lamp: N/A
Luminaire Lumens: 9489.0 lumens
Efficiency: N/A
Efficacy: 109.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	6504	6504	6504
5°	6415	6408	6400
10°	6360	6352	6306
15°	6188	6126	6040
20°	5961	5865	5705
25°	5716	5591	5243
30°	5417	5244	4723
35°	5131	4846	4369
40°	4839	4417	3975
45°	4561	4083	3594
50°	4222	3790	3205
55°	3906	3434	2871
60°	3579	3067	2571
65°	3149	2686	2277
70°	2594	2352	1934
75°	2062	1801	1888
80°	1385	1299	1213
85°	863	1036	1207

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4561 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	449.9	4.7
10°-20°	1234.8	13.0
20°-30°	1709.5	18.0
30°-40°	1822.9	19.2
40°-50°	1663.0	17.5
50°-60°	1302.8	13.7
60°-70°	849.1	8.9
70°-80°	376.2	4.0
80°-90°	80.8	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°	3394.3	35.8
0°-40°	5217.1	55.0
0°-60°	8182.9	86.2
0°-90°	9489.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9489.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4834	4834	4834	4834	4834	
5°	4750	4744	4744	4739	4739	451
15°	4442	4442	4398	4353	4336	1249
25°	3850	3828	3766	3632	3532	1768
35°	3124	3101	2950	2727	2660	1953
45°	2397	2347	2146	1967	1889	1847
55°	1665	1615	1464	1291	1224	1494
65°	989	933	844	860	715	975
75°	397	369	346	330	363	425
85°	56	62	67	73	78	78
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4833.6	4833.6	4833.6	4833.6	4833.6
2.5°	4800.0	4800.0	4800.0	4794.5	4794.5
5°	4749.8	4744.2	4744.2	4738.6	4738.6
7.5°	4710.6	4705.0	4699.5	4693.9	4682.7
10°	4654.8	4654.8	4649.2	4621.2	4615.6
12.5°	4565.3	4559.8	4537.4	4498.3	4487.1
15°	4442.4	4442.4	4397.7	4353.0	4336.2
17.5°	4308.3	4302.7	4246.8	4202.1	4179.8
20°	4163.0	4151.8	4096.0	4023.3	3984.2
22.5°	4001.0	4001.0	3933.9	3838.9	3799.8
25°	3850.1	3827.7	3766.3	3632.2	3531.6
27.5°	3676.9	3643.3	3576.3	3386.3	3268.9
30°	3486.9	3470.1	3375.1	3129.2	3039.8
32.5°	3308.1	3280.1	3179.5	2922.5	2849.9
35°	3123.7	3101.3	2950.4	2726.9	2659.9
37.5°	2939.3	2911.3	2721.3	2542.5	2458.7
40°	2754.9	2721.3	2514.6	2352.5	2263.1
42.5°	2581.6	2536.9	2335.8	2162.5	2062.0
45°	2397.2	2346.9	2145.8	1967.0	1888.7
47.5°	2212.8	2168.1	1983.7	1799.3	1709.9
50°	2017.2	1978.1	1810.5	1626.1	1531.1
52.5°	1855.2	1793.7	1631.7	1447.3	1369.0
55°	1665.2	1614.9	1464.0	1290.8	1223.8
57.5°	1492.0	1441.7	1302.0	1139.9	1084.1
60°	1329.9	1257.3	1139.9	1000.2	955.5
62.5°	1151.1	1095.2	994.7	877.3	933.2
65°	989.1	933.2	843.8	860.5	715.3
67.5°	810.3	782.3	704.1	625.8	603.5
70°	659.4	625.8	597.9	514.1	491.7
72.5°	525.3	491.7	452.6	407.9	391.2
75°	396.7	368.8	346.5	329.7	363.2
77.5°	273.8	262.6	245.9	229.1	223.5
80°	178.8	173.2	167.6	162.1	156.5
82.5°	106.2	106.2	106.2	106.2	106.2
85°	55.9	61.5	67.1	72.6	78.2
87.5°	33.5	33.5	39.1	44.7	50.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)