

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: P562815

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-80-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562815
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-LD4-2LO-50-UNV-80-97-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

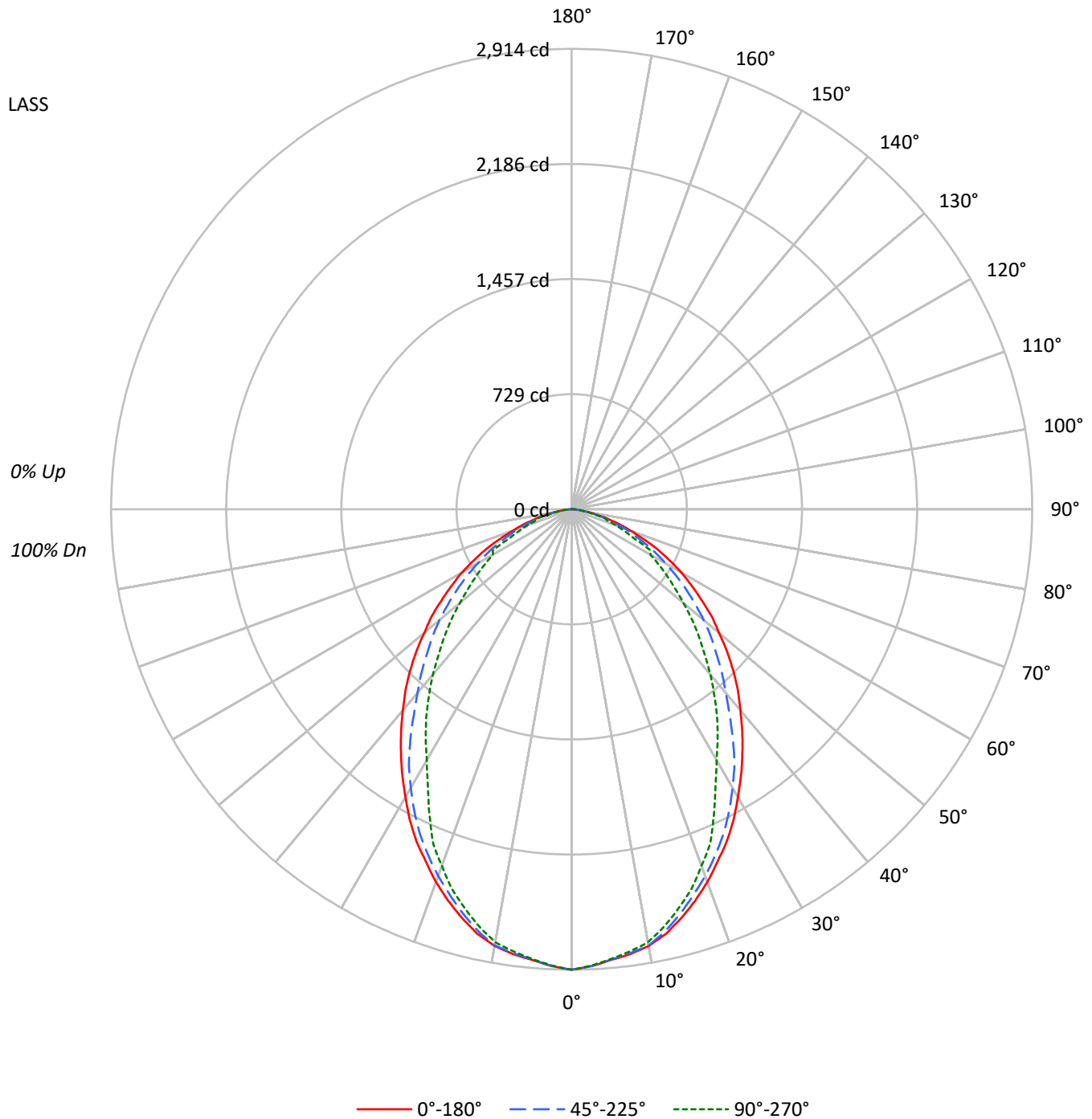
Lumens per Lamp: N/A
Luminaire Lumens: 5721.0 lumens
Efficiency: N/A
Efficacy: 122.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3921	3921	3921
5°	3868	3863	3859
10°	3834	3830	3802
15°	3731	3693	3642
20°	3594	3536	3439
25°	3446	3371	3161
30°	3266	3161	2847
35°	3093	2922	2634
40°	2917	2663	2397
45°	2750	2462	2167
50°	2546	2285	1932
55°	2355	2071	1731
60°	2158	1850	1550
65°	1898	1620	1373
70°	1564	1418	1166
75°	1243	1086	1138
80°	835	783	731
85°	520	624	729

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2750 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	271.3	4.7
10°-20°	744.5	13.0
20°-30°	1030.7	18.0
30°-40°	1099.0	19.2
40°-50°	1002.6	17.5
50°-60°	785.5	13.7
60°-70°	511.9	8.9
70°-80°	226.8	4.0
80°-90°	48.7	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°	2046.5	35.8
0°-40°	3145.5	55.0
0°-60°	4933.6	86.2
0°-90°	5721.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5721.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2914	2914	2914	2914	2914	
5°	2864	2860	2860	2857	2857	272
15°	2678	2678	2651	2624	2614	753
25°	2321	2308	2271	2190	2129	1066
35°	1883	1870	1779	1644	1604	1177
45°	1445	1415	1294	1186	1139	1113
55°	1004	974	883	778	738	900
65°	596	563	509	519	431	588
75°	239	222	209	199	219	256
85°	34	37	40	44	47	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2914.2	2914.2	2914.2	2914.2	2914.2
2.5°	2894.0	2894.0	2894.0	2890.6	2890.6
5°	2863.7	2860.3	2860.3	2856.9	2856.9
7.5°	2840.1	2836.7	2833.3	2830.0	2823.2
10°	2806.4	2806.4	2803.0	2786.2	2782.8
12.5°	2752.5	2749.1	2735.6	2712.1	2705.3
15°	2678.4	2678.4	2651.4	2624.5	2614.4
17.5°	2597.5	2594.1	2560.5	2533.5	2520.0
20°	2509.9	2503.2	2469.5	2425.7	2402.1
22.5°	2412.2	2412.2	2371.8	2314.5	2290.9
25°	2321.3	2307.8	2270.7	2189.9	2129.2
27.5°	2216.8	2196.6	2156.2	2041.6	1970.9
30°	2102.3	2092.2	2034.9	1886.7	1832.7
32.5°	1994.5	1977.6	1917.0	1762.0	1718.2
35°	1883.3	1869.8	1778.8	1644.1	1603.7
37.5°	1772.1	1755.3	1640.7	1532.9	1482.4
40°	1660.9	1640.7	1516.1	1418.4	1364.5
42.5°	1556.5	1529.5	1408.2	1303.8	1243.2
45°	1445.3	1415.0	1293.7	1185.9	1138.7
47.5°	1334.1	1307.2	1196.0	1084.8	1030.9
50°	1216.2	1192.6	1091.6	980.4	923.1
52.5°	1118.5	1081.5	983.8	872.6	825.4
55°	1004.0	973.6	882.7	778.2	737.8
57.5°	899.5	869.2	785.0	687.3	653.6
60°	801.8	758.0	687.3	603.1	576.1
62.5°	694.0	660.3	599.7	528.9	562.6
65°	596.3	562.6	508.7	518.8	431.2
67.5°	488.5	471.7	424.5	377.3	363.9
70°	397.5	377.3	360.5	309.9	296.5
72.5°	316.7	296.5	272.9	245.9	235.8
75°	239.2	222.4	208.9	198.8	219.0
77.5°	165.1	158.3	148.2	138.1	134.8
80°	107.8	104.4	101.1	97.7	94.3
82.5°	64.0	64.0	64.0	64.0	64.0
85°	33.7	37.1	40.4	43.8	47.2
87.5°	20.2	20.2	23.6	27.0	30.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)