

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: P564159

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564159
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-LD4-4STD-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

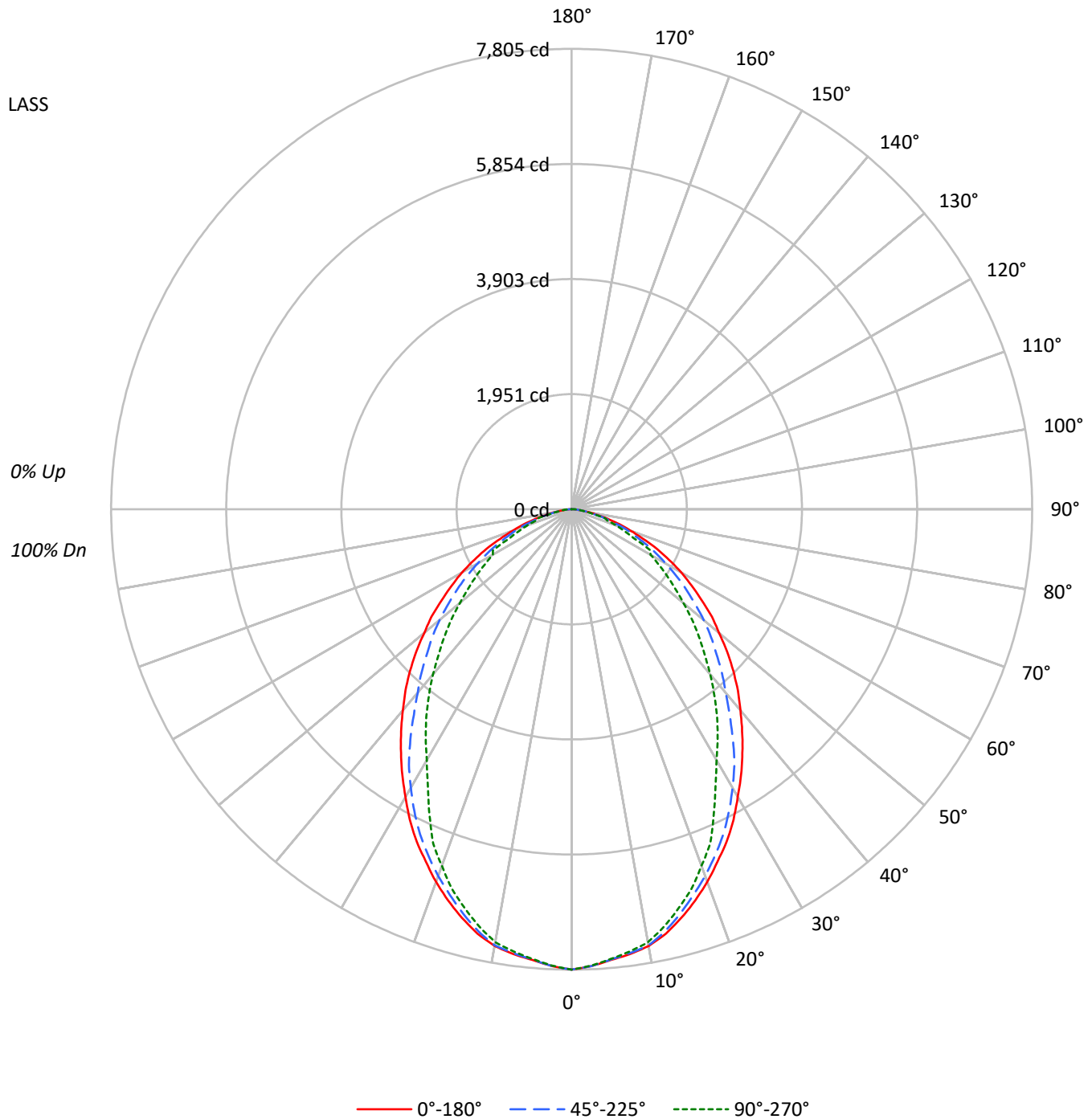
Lumens per Lamp: N/A
Luminaire Lumens: 15322.0 lumens
Efficiency: N/A
Efficacy: 115.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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°	10501	10501	10501
5°	10359	10346	10334
10°	10269	10257	10182
15°	9992	9891	9753
20°	9625	9470	9211
25°	9229	9028	8466
30°	8747	8467	7626
35°	8285	7825	7055
40°	7813	7132	6418
45°	7365	6593	5803
50°	6818	6119	5175
55°	6307	5545	4635
60°	5779	4953	4152
65°	5085	4338	3677
70°	4188	3798	3124
75°	3330	2908	3049
80°	2237	2097	1957
85°	1392	1672	1950

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7365 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	726.5	4.7
10°-20°	1993.9	13.0
20°-30°	2760.4	18.0
30°-40°	2943.4	19.2
40°-50°	2685.2	17.5
50°-60°	2103.7	13.7
60°-70°	1371.1	8.9
70°-80°	607.4	4.0
80°-90°	130.4	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°	5480.8	35.8
0°-40°	8424.2	55.0
0°-60°	13213.1	86.2
0°-90°	15322.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15322.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7805	7805	7805	7805	7805	
5°	7670	7660	7660	7651	7651	728
15°	7173	7173	7101	7029	7002	2017
25°	6217	6181	6081	5865	5702	2854
35°	5044	5008	4764	4403	4295	3153
45°	3871	3790	3465	3176	3050	2982
55°	2689	2608	2364	2084	1976	2412
65°	1597	1507	1362	1390	1155	1574
75°	641	596	559	532	586	687
85°	90	99	108	117	126	125
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7804.8	7804.8	7804.8	7804.8	7804.8
2.5°	7750.7	7750.7	7750.7	7741.7	7741.7
5°	7669.5	7660.5	7660.5	7651.4	7651.4
7.5°	7606.3	7597.3	7588.3	7579.2	7561.2
10°	7516.1	7516.1	7507.1	7462.0	7452.9
12.5°	7371.7	7362.7	7326.6	7263.4	7245.4
15°	7173.2	7173.2	7101.0	7028.9	7001.8
17.5°	6956.7	6947.6	6857.4	6785.2	6749.1
20°	6722.1	6704.0	6613.8	6496.5	6433.3
22.5°	6460.4	6460.4	6352.1	6198.7	6135.6
25°	6216.8	6180.7	6081.4	5864.9	5702.5
27.5°	5937.1	5882.9	5774.7	5467.9	5278.4
30°	5630.3	5603.2	5449.8	5052.8	4908.5
32.5°	5341.6	5296.5	5134.0	4719.0	4601.7
35°	5043.8	5007.7	4764.1	4403.2	4294.9
37.5°	4746.1	4700.9	4394.2	4105.4	3970.1
40°	4448.3	4394.2	4060.3	3798.6	3654.3
42.5°	4168.6	4096.4	3771.6	3491.9	3329.5
45°	3870.8	3789.6	3464.8	3176.1	3049.7
47.5°	3573.1	3500.9	3203.1	2905.4	2761.0
50°	3257.3	3194.1	2923.4	2625.7	2472.3
52.5°	2995.6	2896.4	2634.7	2336.9	2210.6
55°	2688.8	2607.6	2364.0	2084.3	1976.0
57.5°	2409.1	2327.9	2102.3	1840.7	1750.4
60°	2147.5	2030.2	1840.7	1615.1	1542.9
62.5°	1858.7	1768.5	1606.1	1416.6	1506.8
65°	1597.1	1506.8	1362.5	1389.5	1154.9
67.5°	1308.3	1263.2	1136.9	1010.6	974.5
70°	1064.7	1010.6	965.5	830.1	794.0
72.5°	848.2	794.0	730.9	658.7	631.6
75°	640.6	595.5	559.4	532.4	586.5
77.5°	442.1	424.1	397.0	369.9	360.9
80°	288.7	279.7	270.7	261.7	252.6
82.5°	171.4	171.4	171.4	171.4	171.4
85°	90.2	99.3	108.3	117.3	126.3
87.5°	54.1	54.1	63.2	72.2	81.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)