

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: P563003

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-80-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563003
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-LD4-2STD-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8035.0 lumens
Efficiency: N/A
Efficacy: 120.6 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

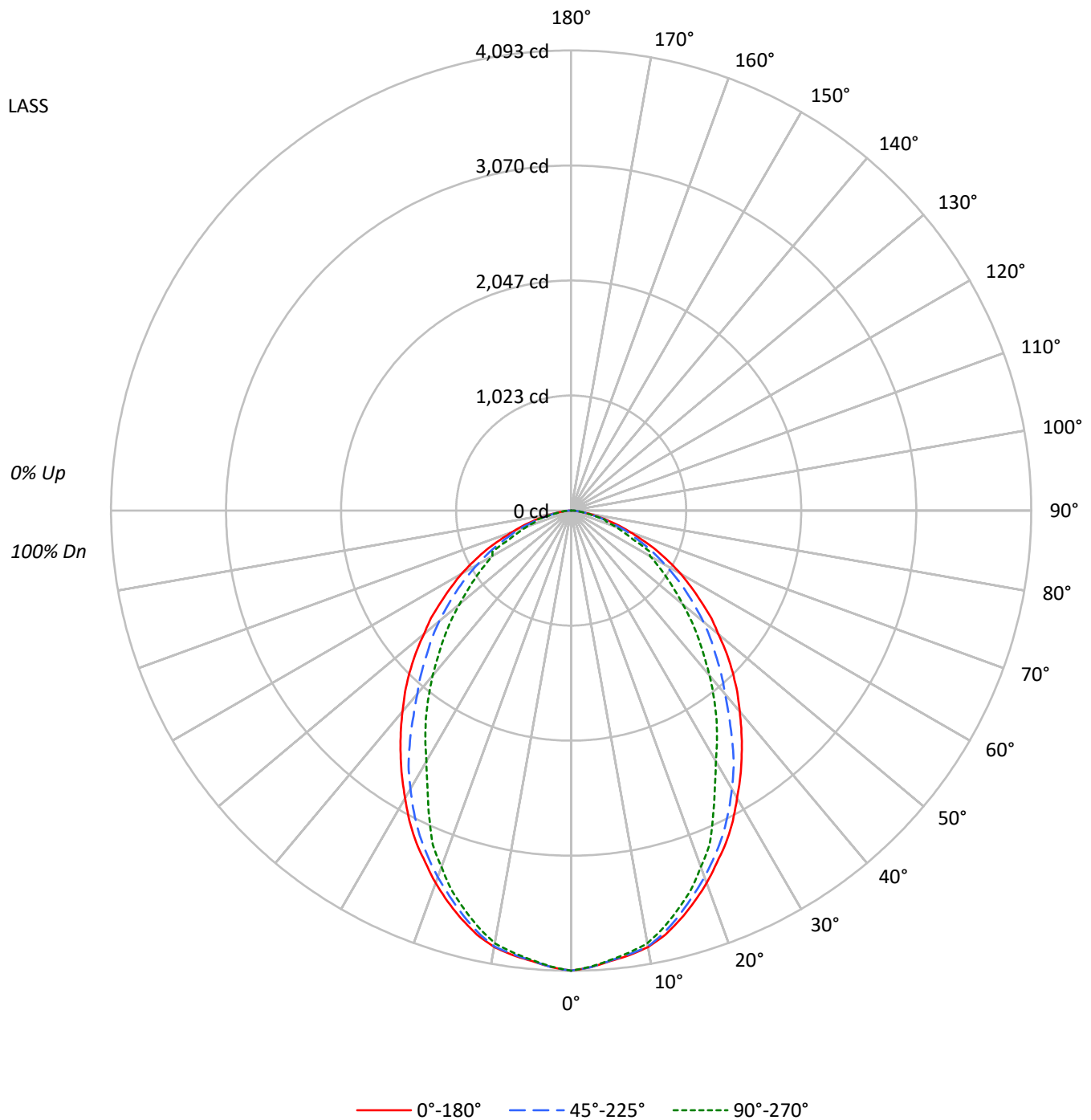
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5507	5507	5507
5°	5432	5426	5419
10°	5385	5379	5340
15°	5240	5187	5115
20°	5047	4966	4831
25°	4840	4735	4439
30°	4587	4440	3999
35°	4345	4104	3699
40°	4097	3740	3366
45°	3863	3457	3043
50°	3575	3209	2714
55°	3308	2908	2431
60°	3030	2598	2177
65°	2666	2275	1928
70°	2196	1992	1638
75°	1747	1525	1599
80°	1173	1100	1027
85°	730	877	1022

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3863 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	381.0	4.7
10°-20°	1045.6	13.0
20°-30°	1447.6	18.0
30°-40°	1543.5	19.2
40°-50°	1408.2	17.5
50°-60°	1103.2	13.7
60°-70°	719.0	8.9
70°-80°	318.6	4.0
80°-90°	68.4	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°	2874.2	35.8
0°-40°	4417.7	55.0
0°-60°	6929.1	86.2
0°-90°	8035.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8035.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4093	4093	4093	4093	4093	
5°	4022	4017	4017	4012	4012	382
15°	3762	3762	3724	3686	3672	1058
25°	3260	3241	3189	3076	2990	1497
35°	2645	2626	2498	2309	2252	1654
45°	2030	1987	1817	1666	1599	1564
55°	1410	1368	1240	1093	1036	1265
65°	838	790	714	729	606	825
75°	336	312	293	279	308	360
85°	47	52	57	62	66	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4092.9	4092.9	4092.9	4092.9	4092.9
2.5°	4064.5	4064.5	4064.5	4059.8	4059.8
5°	4021.9	4017.2	4017.2	4012.5	4012.5
7.5°	3988.8	3984.1	3979.4	3974.6	3965.2
10°	3941.5	3941.5	3936.8	3913.1	3908.4
12.5°	3865.8	3861.1	3842.1	3809.0	3799.6
15°	3761.7	3761.7	3723.8	3686.0	3671.8
17.5°	3648.1	3643.4	3596.1	3558.2	3539.3
20°	3525.1	3515.7	3468.3	3406.8	3373.7
22.5°	3387.9	3387.9	3331.1	3250.7	3217.6
25°	3260.1	3241.2	3189.2	3075.6	2990.4
27.5°	3113.5	3085.1	3028.3	2867.4	2768.0
30°	2952.6	2938.4	2857.9	2649.8	2574.0
32.5°	2801.2	2777.5	2692.3	2474.7	2413.2
35°	2645.0	2626.1	2498.3	2309.1	2252.3
37.5°	2488.9	2465.2	2304.3	2152.9	2081.9
40°	2332.7	2304.3	2129.3	1992.0	1916.3
42.5°	2186.0	2148.2	1977.9	1831.2	1746.0
45°	2029.9	1987.3	1817.0	1665.6	1599.3
47.5°	1873.8	1835.9	1679.8	1523.6	1447.9
50°	1708.1	1675.0	1533.1	1376.9	1296.5
52.5°	1570.9	1518.9	1381.7	1225.5	1159.3
55°	1410.0	1367.5	1239.7	1093.0	1036.2
57.5°	1263.4	1220.8	1102.5	965.3	918.0
60°	1126.1	1064.6	965.3	847.0	809.1
62.5°	974.7	927.4	842.2	742.9	790.2
65°	837.5	790.2	714.5	728.7	605.7
67.5°	686.1	662.4	596.2	530.0	511.0
70°	558.3	530.0	506.3	435.3	416.4
72.5°	444.8	416.4	383.3	345.4	331.2
75°	336.0	312.3	293.4	279.2	307.6
77.5°	231.9	222.4	208.2	194.0	189.3
80°	151.4	146.7	142.0	137.2	132.5
82.5°	89.9	89.9	89.9	89.9	89.9
85°	47.3	52.0	56.8	61.5	66.2
87.5°	28.4	28.4	33.1	37.9	42.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)