

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: P563531

Luminaire Tested: FSR-24-4-LD4-3STD-40-UNV-81-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563531
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-LD4-3STD-40-UNV-81-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11259.0 lumens
Efficiency: N/A
Efficacy: 112.7 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

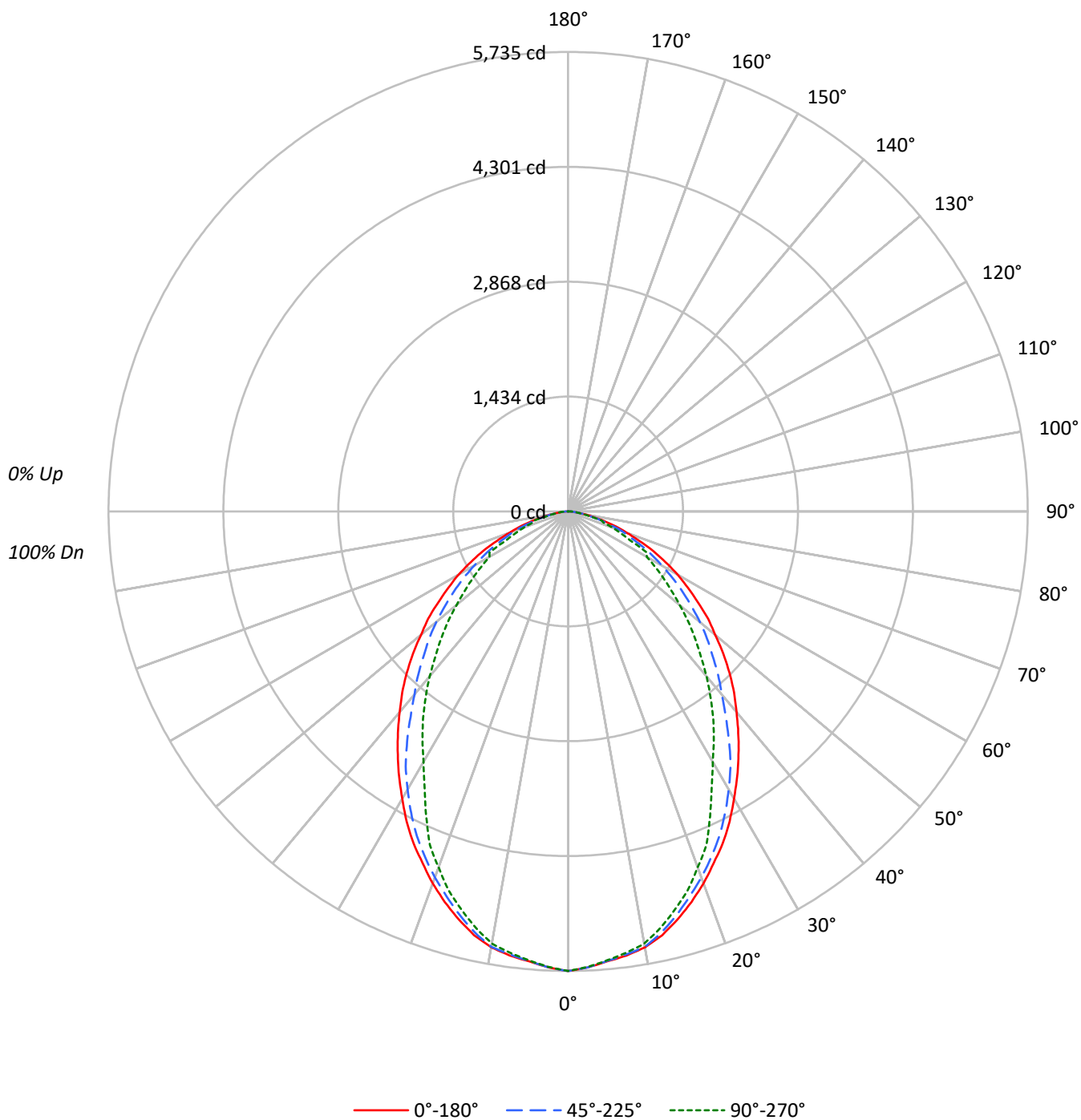
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10
RCR																					
0	119	119	119	119		116	116	116	116		111	111	111		106	106	106		102	102	102
1	110	106	102	99		108	104	100	97		100	97	94		96	94	91		92	90	89
2	101	94	88	83		99	92	87	82		89	84	80		86	82	78		83	79	77
3	93	84	77	71		91	82	76	70		79	74	69		77	72	68		74	70	67
4	86	75	67	61		84	74	66	61		72	65	60		69	64	59		67	62	58
5	80	68	60	54		78	67	59	53		65	58	53		63	57	52		61	56	52
6	74	62	53	48		72	61	53	47		59	52	47		57	51	47		56	50	46
7	69	56	48	43		67	56	48	42		54	47	42		53	46	42		51	46	42
8	65	52	44	38		63	51	44	38		50	43	38		49	42	38		48	42	38
9	61	48	40	35		59	47	40	35		46	39	35		45	39	34		44	38	34
10	57	44	37	32		56	44	37	32		43	36	32		42	36	32		41	36	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7717	7717	7717
5°	7612	7603	7594
10°	7546	7537	7482
15°	7342	7268	7167
20°	7073	6959	6769
25°	6782	6634	6221
30°	6428	6222	5604
35°	6088	5750	5184
40°	5741	5240	4716
45°	5412	4845	4264
50°	5010	4497	3803
55°	4635	4075	3406
60°	4246	3640	3051
65°	3736	3188	2702
70°	3078	2791	2295
75°	2447	2137	2241
80°	1644	1541	1438
85°	1024	1229	1433

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 5412 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	533.9	4.7
10°-20°	1465.2	13.0
20°-30°	2028.4	18.0
30°-40°	2162.9	19.2
40°-50°	1973.2	17.5
50°-60°	1545.8	13.7
60°-70°	1007.5	8.9
70°-80°	446.4	4.0
80°-90°	95.8	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°	4027.4	35.8
0°-40°	6190.3	55.0
0°-60°	9709.3	86.2
0°-90°	11259.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11259.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5735	5735	5735	5735	5735	
5°	5636	5629	5629	5622	5622	535
15°	5271	5271	5218	5165	5145	1482
25°	4568	4542	4469	4310	4190	2097
35°	3706	3680	3501	3236	3156	2317
45°	2844	2785	2546	2334	2241	2191
55°	1976	1916	1737	1532	1452	1772
65°	1174	1107	1001	1021	849	1157
75°	471	438	411	391	431	505
85°	66	73	80	86	93	92
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5735.2	5735.2	5735.2	5735.2	5735.2
2.5°	5695.4	5695.4	5695.4	5688.8	5688.8
5°	5635.7	5629.1	5629.1	5622.5	5622.5
7.5°	5589.3	5582.7	5576.1	5569.4	5556.2
10°	5523.0	5523.0	5516.4	5483.2	5476.6
12.5°	5416.9	5410.3	5383.8	5337.4	5324.1
15°	5271.1	5271.1	5218.0	5165.0	5145.1
17.5°	5111.9	5105.3	5039.0	4986.0	4959.4
20°	4939.6	4926.3	4860.0	4773.8	4727.4
22.5°	4747.3	4747.3	4667.7	4555.0	4508.6
25°	4568.3	4541.7	4468.8	4309.7	4190.3
27.5°	4362.7	4322.9	4243.4	4017.9	3878.7
30°	4137.3	4117.4	4004.7	3713.0	3606.9
32.5°	3925.1	3892.0	3772.6	3467.6	3381.4
35°	3706.3	3679.8	3500.8	3235.6	3156.0
37.5°	3487.5	3454.4	3228.9	3016.8	2917.3
40°	3268.7	3228.9	2983.6	2791.3	2685.3
42.5°	3063.2	3010.1	2771.5	2565.9	2446.6
45°	2844.4	2784.7	2546.0	2333.9	2241.0
47.5°	2625.6	2572.5	2353.7	2134.9	2028.9
50°	2393.5	2347.1	2148.2	1929.4	1816.7
52.5°	2201.2	2128.3	1936.0	1717.2	1624.4
55°	1975.8	1916.1	1737.1	1531.6	1452.0
57.5°	1770.3	1710.6	1544.9	1352.6	1286.3
60°	1578.0	1491.8	1352.6	1186.8	1133.8
62.5°	1365.8	1299.5	1180.2	1041.0	1107.3
65°	1173.6	1107.3	1001.2	1021.1	848.7
67.5°	961.4	928.2	835.4	742.6	716.1
70°	782.4	742.6	709.4	610.0	583.5
72.5°	623.2	583.5	537.1	484.0	464.1
75°	470.7	437.6	411.1	391.2	431.0
77.5°	324.9	311.6	291.7	271.8	265.2
80°	212.2	205.5	198.9	192.3	185.6
82.5°	126.0	126.0	126.0	126.0	126.0
85°	66.3	72.9	79.6	86.2	92.8
87.5°	39.8	39.8	46.4	53.0	59.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)