

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: P563671

Luminaire Tested: FSR-24-4-LD4-4HI-35-UNV-82-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563671
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-LD4-4HI-35-UNV-82-87-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16696.0 lumens
Efficiency: N/A
Efficacy: 96.6 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

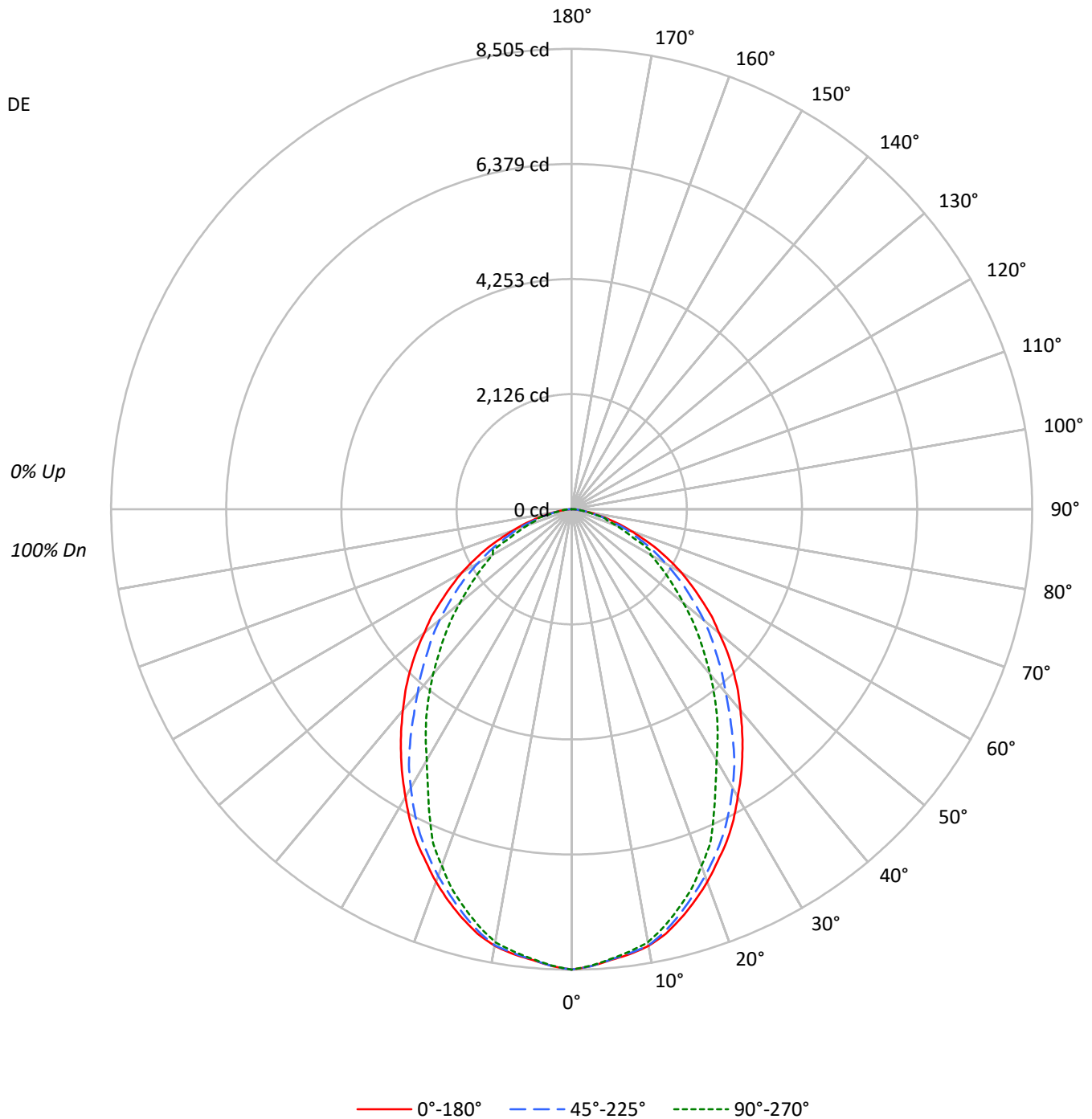
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	11443	11443	11443
5°	11287	11274	11261
10°	11190	11176	11096
15°	10888	10778	10628
20°	10488	10319	10037
25°	10057	9838	9225
30°	9532	9226	8310
35°	9028	8527	7687
40°	8514	7771	6994
45°	8026	7184	6323
50°	7430	6668	5639
55°	6873	6043	5051
60°	6297	5397	4524
65°	5541	4727	4007
70°	4564	4139	3404
75°	3629	3169	3322
80°	2438	2286	2133
85°	1518	1822	2124

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8026 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	791.7	4.7
10°-20°	2172.7	13.0
20°-30°	3007.9	18.0
30°-40°	3207.3	19.2
40°-50°	2926.0	17.5
50°-60°	2292.3	13.7
60°-70°	1494.0	8.9
70°-80°	661.9	4.0
80°-90°	142.1	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°	5972.3	35.8
0°-40°	9179.6	55.0
0°-60°	14398.0	86.2
0°-90°	16696.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16696.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8505	8505	8505	8505	8505	
5°	8357	8347	8347	8338	8338	793
15°	7816	7816	7738	7659	7630	2197
25°	6774	6735	6627	6391	6214	3110
35°	5496	5457	5191	4798	4680	3436
45°	4218	4130	3776	3461	3323	3249
55°	2930	2842	2576	2271	2153	2628
65°	1740	1642	1485	1514	1258	1715
75°	698	649	610	580	639	748
85°	98	108	118	128	138	136
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8504.7	8504.7	8504.7	8504.7	8504.7
2.5°	8445.7	8445.7	8445.7	8435.9	8435.9
5°	8357.2	8347.4	8347.4	8337.6	8337.6
7.5°	8288.4	8278.6	8268.8	8258.9	8239.3
10°	8190.1	8190.1	8180.3	8131.1	8121.3
12.5°	8032.8	8022.9	7983.6	7914.8	7895.1
15°	7816.5	7816.5	7737.8	7659.2	7629.7
17.5°	7580.5	7570.7	7472.4	7393.7	7354.4
20°	7324.9	7305.2	7206.9	7079.1	7010.2
22.5°	7039.7	7039.7	6921.8	6754.6	6685.8
25°	6774.3	6735.0	6626.8	6390.8	6213.9
27.5°	6469.5	6410.5	6292.5	5958.2	5751.7
30°	6135.2	6105.7	5938.6	5505.9	5348.6
32.5°	5820.6	5771.4	5594.4	5142.2	5014.3
35°	5496.1	5456.8	5191.3	4798.0	4680.1
37.5°	5171.7	5122.5	4788.2	4473.6	4326.1
40°	4847.2	4788.2	4424.4	4139.3	3982.0
42.5°	4542.4	4463.7	4109.8	3805.0	3628.0
45°	4217.9	4129.5	3775.5	3460.9	3323.2
47.5°	3893.5	3814.8	3490.4	3165.9	3008.6
50°	3549.4	3480.5	3185.6	2861.1	2694.0
52.5°	3264.2	3156.1	2871.0	2546.5	2408.9
55°	2929.9	2841.5	2576.0	2271.2	2153.2
57.5°	2625.2	2536.7	2290.9	2005.7	1907.4
60°	2340.0	2212.2	2005.7	1759.9	1681.3
62.5°	2025.4	1927.1	1750.1	1543.6	1642.0
65°	1740.3	1642.0	1484.6	1514.1	1258.5
67.5°	1425.6	1376.5	1238.8	1101.2	1061.9
70°	1160.2	1101.2	1052.0	904.5	865.2
72.5°	924.2	865.2	796.4	717.7	688.2
75°	698.1	648.9	609.6	580.1	639.1
77.5°	481.8	462.1	432.6	403.1	393.3
80°	314.6	304.8	295.0	285.1	275.3
82.5°	186.8	186.8	186.8	186.8	186.8
85°	98.3	108.2	118.0	127.8	137.6
87.5°	59.0	59.0	68.8	78.7	88.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)