

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: P563735

Luminaire Tested: FSR-24-4-LD4-4HI-40-UNV-82-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563735
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16863.0 lumens
Efficiency: N/A
Efficacy: 97.6 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

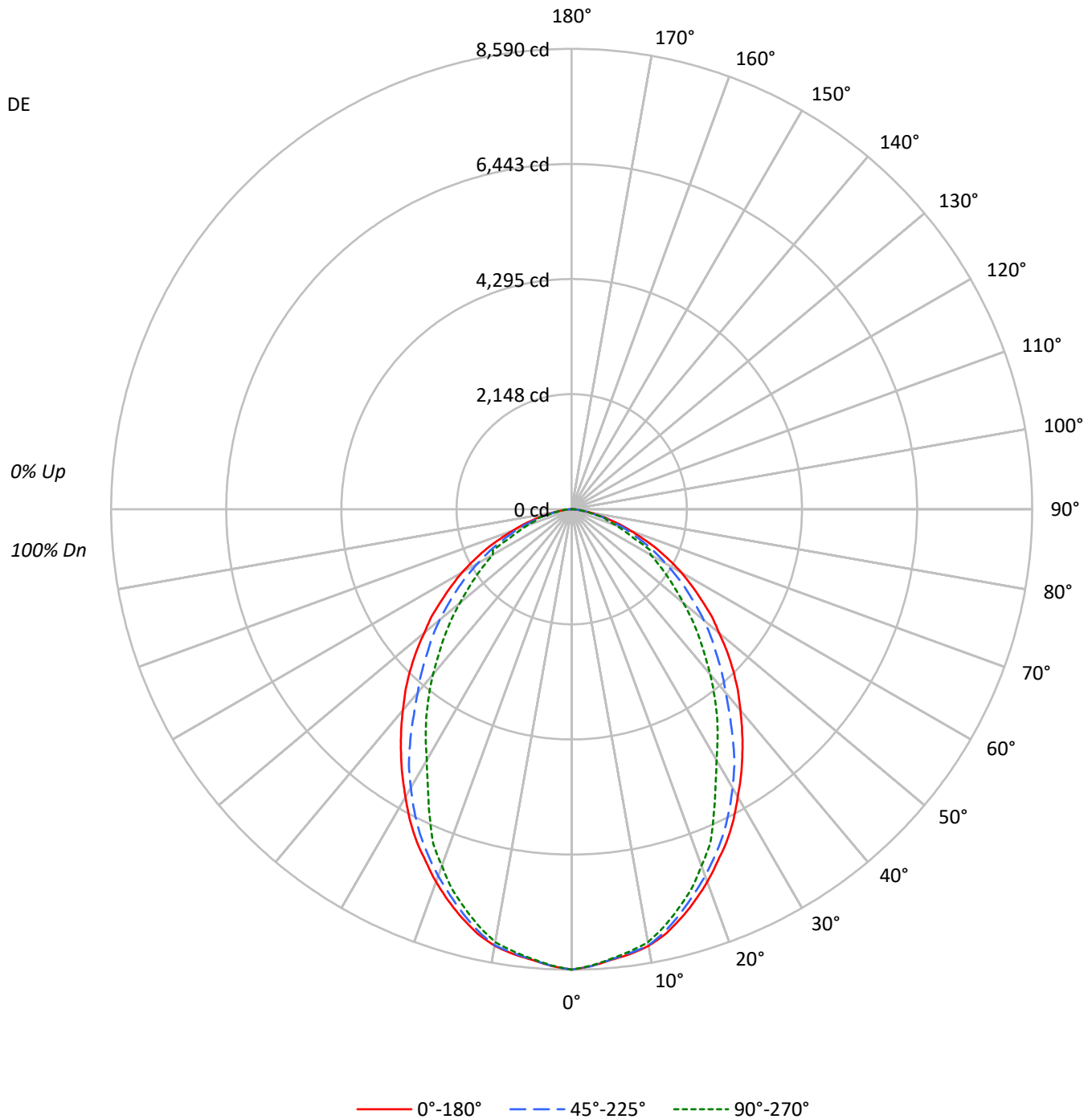
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	11557	11557	11557
5°	11400	11387	11374
10°	11302	11288	11207
15°	10997	10886	10734
20°	10593	10422	10138
25°	10158	9936	9317
30°	9627	9319	8393
35°	9118	8612	7764
40°	8599	7849	7064
45°	8106	7256	6387
50°	7504	6735	5695
55°	6942	6103	5102
60°	6360	5451	4570
65°	5596	4774	4047
70°	4610	4180	3438
75°	3666	3201	3356
80°	2462	2308	2155
85°	1533	1840	2146

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8106 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	799.6	4.7
10°-20°	2194.4	13.0
20°-30°	3038.0	18.0
30°-40°	3239.4	19.2
40°-50°	2955.3	17.5
50°-60°	2315.2	13.7
60°-70°	1509.0	8.9
70°-80°	668.5	4.0
80°-90°	143.5	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°	6032.0	35.8
0°-40°	9271.5	55.0
0°-60°	14542.0	86.2
0°-90°	16863.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16863.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8590	8590	8590	8590	8590	
5°	8441	8431	8431	8421	8421	801
15°	7895	7895	7815	7736	7706	2219
25°	6842	6802	6693	6455	6276	3141
35°	5551	5511	5243	4846	4727	3470
45°	4260	4171	3813	3496	3356	3282
55°	2959	2870	2602	2294	2175	2654
65°	1758	1658	1500	1529	1271	1732
75°	705	655	616	586	646	756
85°	99	109	119	129	139	138
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8589.8	8589.8	8589.8	8589.8	8589.8
2.5°	8530.2	8530.2	8530.2	8520.3	8520.3
5°	8440.8	8430.9	8430.9	8421.0	8421.0
7.5°	8371.3	8361.4	8351.5	8341.5	8321.7
10°	8272.0	8272.0	8262.1	8212.4	8202.5
12.5°	8113.1	8103.2	8063.5	7994.0	7974.1
15°	7894.7	7894.7	7815.2	7735.8	7706.0
17.5°	7656.3	7646.4	7547.1	7467.7	7427.9
20°	7398.1	7378.3	7279.0	7149.9	7080.4
22.5°	7110.2	7110.2	6991.0	6822.2	6752.7
25°	6842.0	6802.3	6693.1	6454.8	6276.0
27.5°	6534.2	6474.6	6355.4	6017.8	5809.3
30°	6196.6	6166.8	5998.0	5561.0	5402.1
32.5°	5878.8	5829.1	5650.4	5193.6	5064.5
35°	5551.1	5511.4	5243.2	4846.0	4726.9
37.5°	5223.4	5173.7	4836.1	4518.3	4369.4
40°	4895.7	4836.1	4468.7	4180.7	4021.8
42.5°	4587.8	4508.4	4150.9	3843.1	3664.3
45°	4260.1	4170.8	3813.3	3495.5	3356.5
47.5°	3932.4	3853.0	3525.3	3197.6	3038.7
50°	3584.9	3515.4	3217.4	2889.7	2720.9
52.5°	3296.9	3187.7	2899.7	2572.0	2432.9
55°	2959.3	2869.9	2601.8	2293.9	2174.8
57.5°	2651.4	2562.0	2313.8	2025.8	1926.5
60°	2363.4	2234.3	2025.8	1777.5	1698.1
62.5°	2045.7	1946.4	1767.6	1559.1	1658.4
65°	1757.7	1658.4	1499.5	1529.3	1271.1
67.5°	1439.9	1390.3	1251.2	1112.2	1072.5
70°	1171.8	1112.2	1062.6	913.6	873.9
72.5°	933.5	873.9	804.4	724.9	695.1
75°	705.1	655.4	615.7	585.9	645.5
77.5°	486.6	466.7	436.9	407.1	397.2
80°	317.8	307.8	297.9	288.0	278.1
82.5°	188.7	188.7	188.7	188.7	188.7
85°	99.3	109.2	119.2	129.1	139.0
87.5°	59.6	59.6	69.5	79.4	89.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)