

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: P562626

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-81-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562626
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-LD4-2HI-50-UNV-81-85-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7966.0 lumens
Efficiency: N/A
Efficacy: 92.2 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

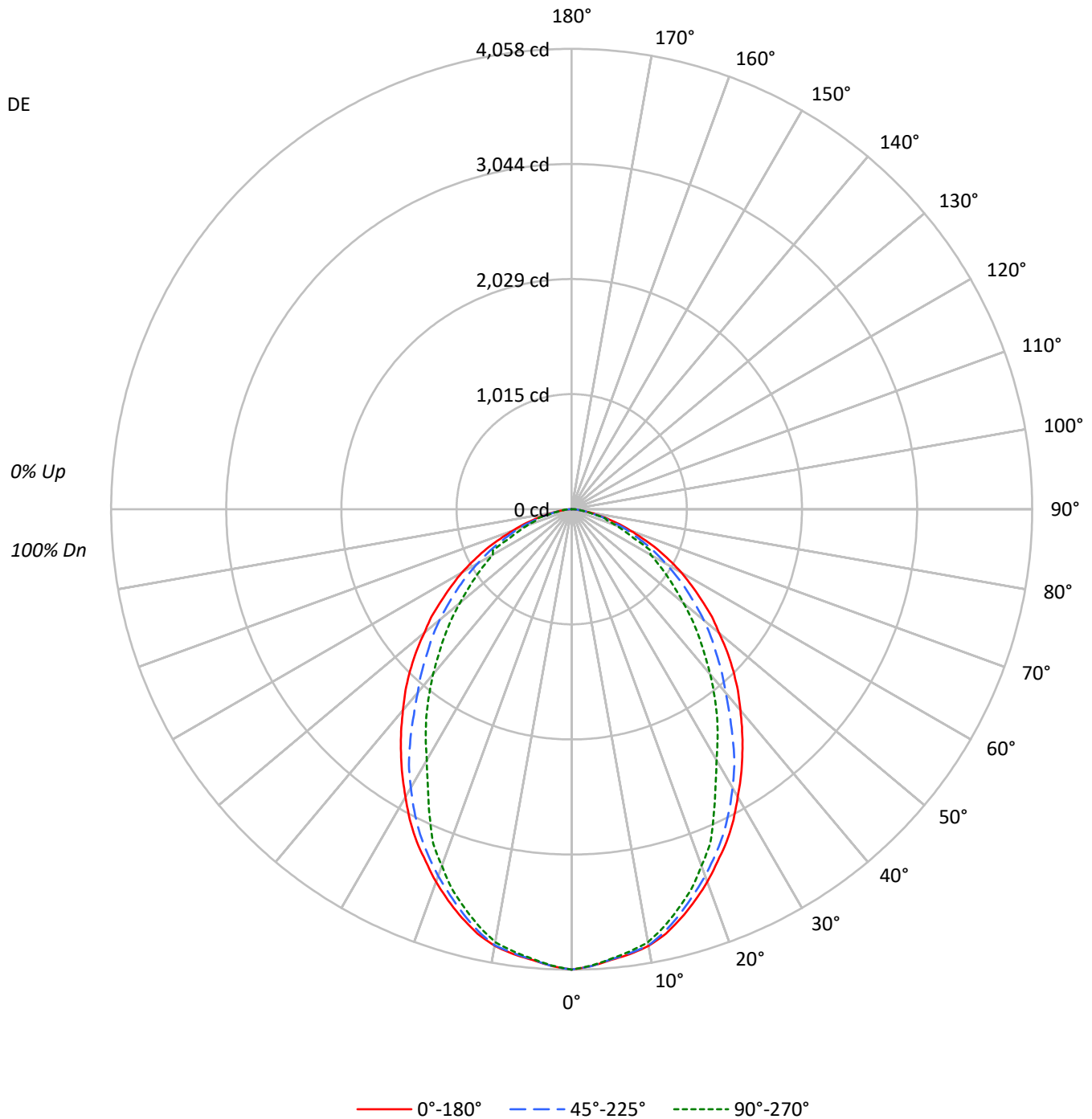
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5460	5460	5460
5°	5385	5379	5373
10°	5339	5332	5294
15°	5195	5143	5071
20°	5004	4924	4789
25°	4798	4694	4401
30°	4548	4402	3965
35°	4307	4068	3668
40°	4062	3708	3337
45°	3829	3428	3017
50°	3545	3181	2691
55°	3279	2883	2410
60°	3004	2575	2159
65°	2643	2255	1912
70°	2177	1974	1624
75°	1732	1512	1585
80°	1163	1090	1017
85°	724	869	1014

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3829 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	377.7	4.7
10°-20°	1036.6	13.0
20°-30°	1435.2	18.0
30°-40°	1530.3	19.2
40°-50°	1396.1	17.5
50°-60°	1093.7	13.7
60°-70°	712.8	8.9
70°-80°	315.8	4.0
80°-90°	67.8	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°	2849.5	35.8
0°-40°	4379.8	55.0
0°-60°	6869.6	86.2
0°-90°	7966.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7966.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4058	4058	4058	4058	4058	
5°	3987	3983	3983	3978	3978	378
15°	3729	3729	3692	3654	3640	1048
25°	3232	3213	3162	3049	2965	1484
35°	2622	2604	2477	2289	2233	1639
45°	2012	1970	1801	1651	1586	1550
55°	1398	1356	1229	1084	1027	1254
65°	830	783	708	722	600	818
75°	333	310	291	277	305	357
85°	47	52	56	61	66	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4057.8	4057.8	4057.8	4057.8	4057.8
2.5°	4029.6	4029.6	4029.6	4024.9	4024.9
5°	3987.4	3982.7	3982.7	3978.0	3978.0
7.5°	3954.6	3949.9	3945.2	3940.5	3931.1
10°	3907.7	3907.7	3903.0	3879.5	3874.8
12.5°	3832.6	3827.9	3809.1	3776.3	3766.9
15°	3729.4	3729.4	3691.9	3654.3	3640.3
17.5°	3616.8	3612.1	3565.2	3527.7	3508.9
20°	3494.8	3485.5	3438.6	3377.6	3344.7
22.5°	3358.8	3358.8	3302.5	3222.8	3189.9
25°	3232.1	3213.4	3161.8	3049.2	2964.8
27.5°	3086.7	3058.6	3002.3	2842.8	2744.3
30°	2927.2	2913.2	2833.4	2627.0	2551.9
32.5°	2777.1	2753.7	2669.2	2453.4	2392.4
35°	2622.3	2603.5	2476.9	2289.2	2232.9
37.5°	2467.5	2444.0	2284.6	2134.4	2064.1
40°	2312.7	2284.6	2111.0	1974.9	1899.9
42.5°	2167.3	2129.7	1960.9	1815.4	1731.0
45°	2012.5	1970.2	1801.4	1651.3	1585.6
47.5°	1857.7	1820.1	1665.3	1510.5	1435.5
50°	1693.5	1660.6	1519.9	1365.1	1285.4
52.5°	1557.4	1505.8	1369.8	1215.0	1149.3
55°	1397.9	1355.7	1229.1	1083.6	1027.3
57.5°	1252.5	1210.3	1093.0	957.0	910.1
60°	1116.5	1055.5	957.0	839.7	802.2
62.5°	966.4	919.4	835.0	736.5	783.4
65°	830.3	783.4	708.4	722.4	600.5
67.5°	680.2	656.7	591.1	525.4	506.6
70°	553.5	525.4	501.9	431.6	412.8
72.5°	441.0	412.8	380.0	342.4	328.4
75°	333.1	309.6	290.8	276.8	304.9
77.5°	229.9	220.5	206.4	192.3	187.6
80°	150.1	145.4	140.7	136.0	131.3
82.5°	89.1	89.1	89.1	89.1	89.1
85°	46.9	51.6	56.3	61.0	65.7
87.5°	28.1	28.1	32.8	37.5	42.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)