

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: P590271

Luminaire Tested: FSR-24-2-LD4-2LO-40-UNV-81-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590271
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-2LO-40-UNV-81-86-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2710.0 lumens
Efficiency: N/A
Efficacy: 115.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

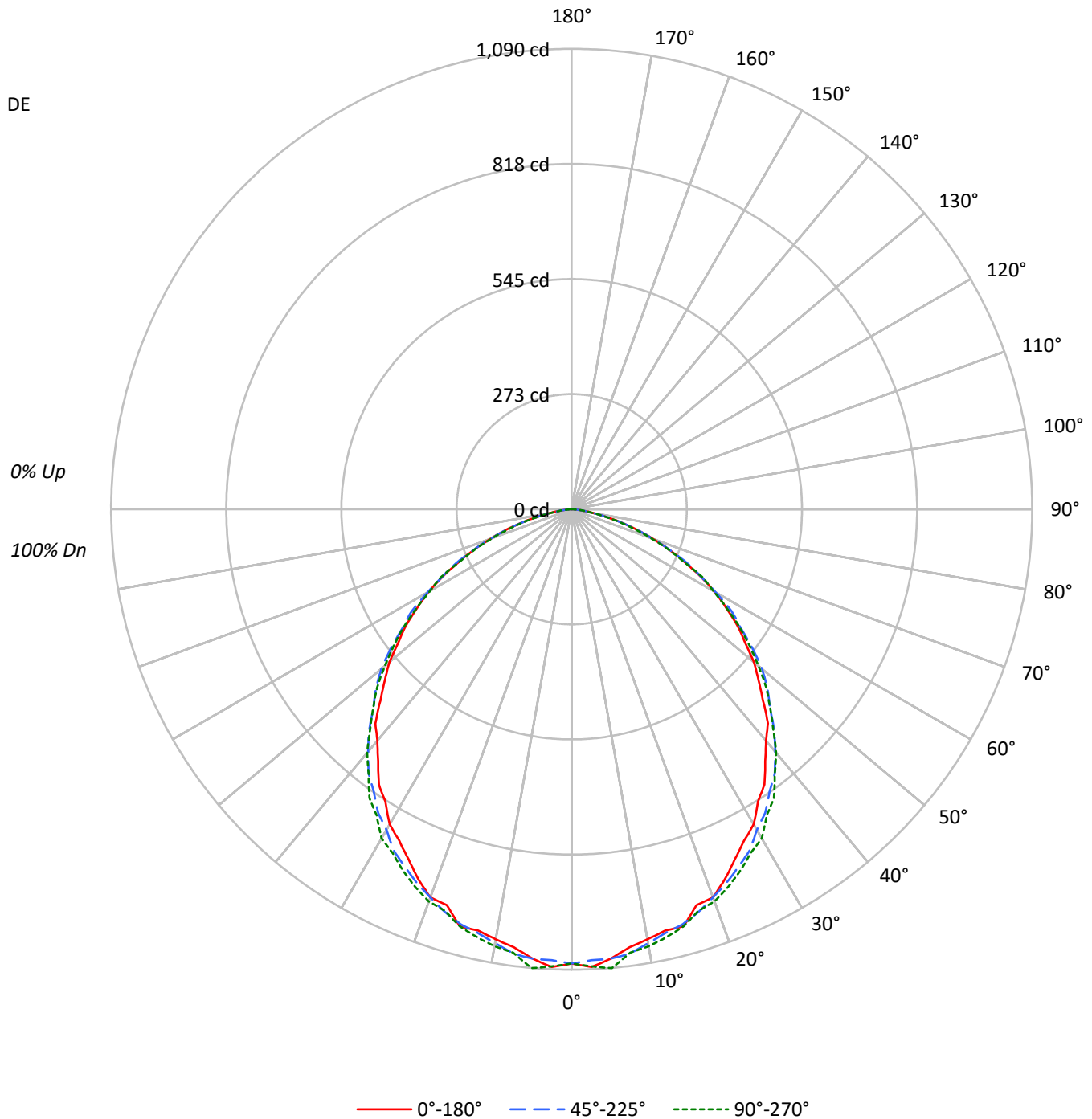
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88					86				
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75					73				
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64					62				
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55					53				
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48					46				
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43					41				
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38					36				
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34					32				
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31					29				
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28					26				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2894	2894	2894
5°	2884	2885	2946
10°	2825	2850	2870
15°	2848	2832	2848
20°	2800	2800	2830
25°	2714	2773	2803
30°	2676	2724	2796
35°	2613	2682	2742
40°	2512	2633	2644
45°	2436	2522	2526
50°	2356	2462	2415
55°	2244	2288	2272
60°	2099	2120	2082
65°	1871	1919	1858
70°	1606	1611	1566
75°	1272	1268	1220
80°	852	829	797
85°	463	460	429

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2587 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.1	3.7
10°-20°	286.7	10.6
20°-30°	429.5	15.8
30°-40°	509.0	18.8
40°-50°	510.0	18.8
50°-60°	432.9	16.0
60°-70°	291.8	10.8
70°-80°	128.2	4.7
80°-90°	20.8	0.8
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°	817.3	30.2
0°-40°	1326.3	48.9
0°-60°	2269.1	83.7
0°-90°	2710.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2710.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1075	1075	1075	1075	1075	
5°	1068	1065	1068	1065	1090	101
15°	1022	1010	1017	1022	1022	285
25°	914	919	934	946	944	423
35°	796	798	816	835	835	494
45°	640	652	663	680	664	495
55°	478	475	488	484	484	426
65°	294	290	301	290	292	292
75°	122	120	122	113	117	131
85°	15	15	15	14	14	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1075.3	1075.3	1075.3	1075.3	1075.3
2.5°	1084.6	1076.4	1068.7	1077.6	1083.0
5°	1067.6	1065.1	1068.0	1064.8	1090.5
7.5°	1045.7	1055.3	1060.8	1057.4	1058.9
10°	1034.0	1030.7	1043.1	1051.7	1050.4
12.5°	1021.5	1026.5	1027.2	1036.5	1037.4
15°	1022.2	1010.4	1016.7	1021.9	1022.4
17.5°	982.5	995.3	999.6	1011.7	996.7
20°	977.7	968.4	977.7	990.0	988.1
22.5°	947.8	937.4	957.4	968.4	967.7
25°	913.9	918.9	933.9	946.1	944.2
27.5°	884.2	890.1	911.4	928.2	917.4
30°	861.3	858.4	876.5	891.4	899.8
32.5°	820.4	830.9	852.0	866.9	859.0
35°	795.5	797.9	816.3	835.2	834.7
37.5°	752.1	763.0	789.0	794.3	789.4
40°	715.0	726.0	749.4	755.1	752.8
42.5°	687.6	689.6	709.7	716.2	705.8
45°	640.0	652.0	662.8	679.9	663.8
47.5°	599.5	605.0	628.4	632.9	624.5
50°	562.7	564.6	588.1	582.4	576.9
52.5°	516.5	524.6	537.8	536.7	530.2
55°	478.4	475.2	487.7	484.4	484.2
57.5°	432.7	438.3	448.6	443.3	434.8
60°	390.0	390.1	393.9	387.9	386.8
62.5°	342.4	344.0	344.9	337.5	349.4
65°	293.9	290.0	301.4	289.9	291.8
67.5°	249.3	251.3	250.2	243.0	245.7
70°	204.1	206.6	204.8	196.6	199.1
72.5°	162.7	159.7	161.6	151.3	156.0
75°	122.3	119.8	122.0	113.4	117.3
77.5°	83.3	85.2	83.9	79.3	81.9
80°	55.0	53.5	53.5	50.8	51.4
82.5°	32.1	30.5	30.1	29.3	30.5
85°	15.0	14.6	14.9	14.4	13.9
87.5°	5.4	5.6	5.6	5.3	5.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)