

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: P590376

Luminaire Tested: FSR-24-2-LD4-2STD-40-UNV-82-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590376
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-LD4-2STD-40-UNV-82-87-EDD
Description: 2X2 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: 3437.0 lumens
Efficiency: N/A
Efficacy: 103.2 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

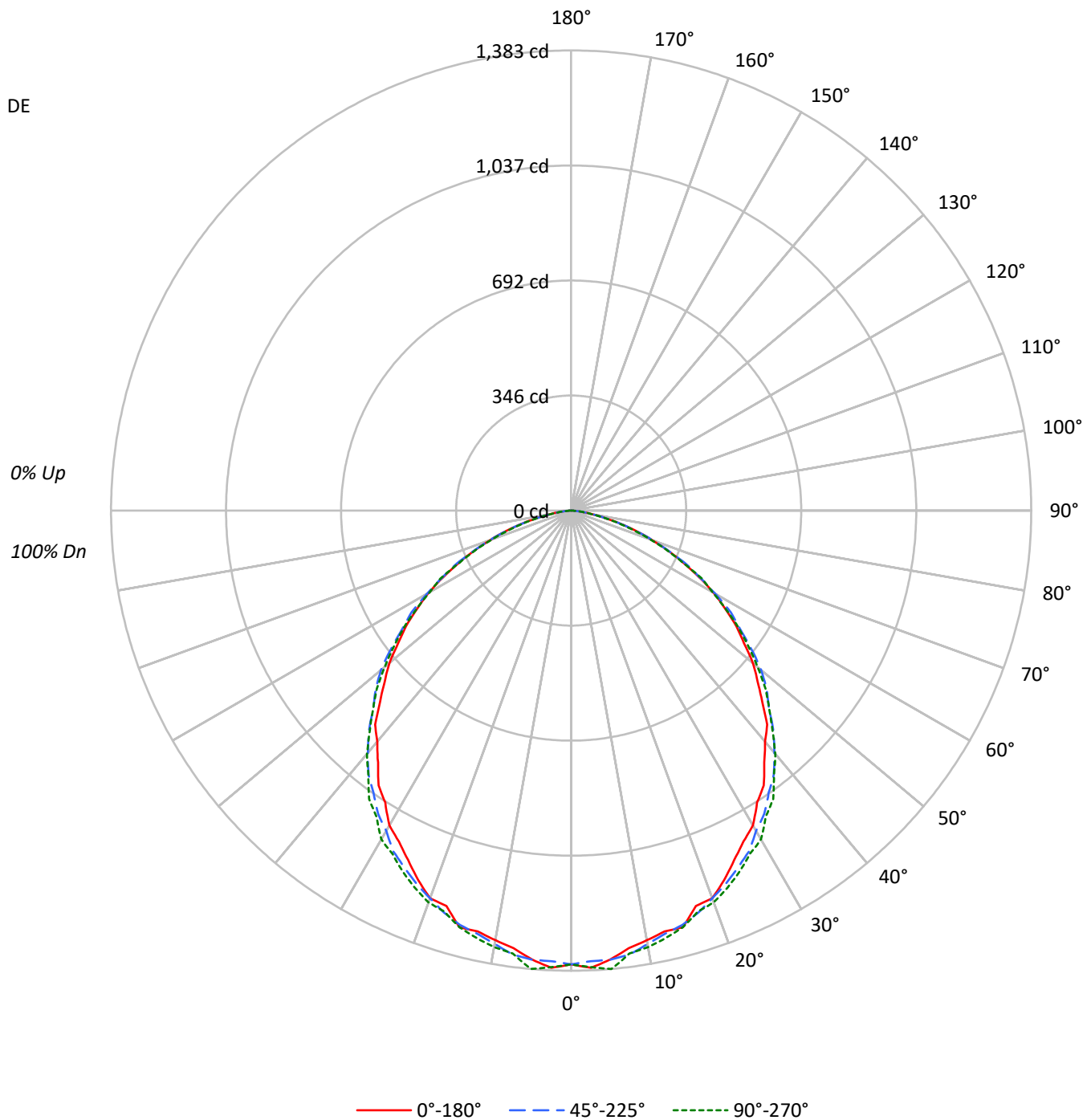
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3670	3670	3670
5°	3658	3659	3736
10°	3583	3615	3640
15°	3612	3592	3612
20°	3551	3551	3588
25°	3442	3517	3556
30°	3394	3454	3546
35°	3314	3401	3478
40°	3185	3339	3354
45°	3089	3199	3204
50°	2987	3123	3063
55°	2847	2902	2882
60°	2662	2688	2640
65°	2374	2434	2357
70°	2036	2043	1987
75°	1613	1609	1547
80°	1080	1051	1009
85°	587	580	543

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3281 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.3	3.7
10°-20°	363.6	10.6
20°-30°	544.7	15.8
30°-40°	645.6	18.8
40°-50°	646.7	18.8
50°-60°	549.0	16.0
60°-70°	370.1	10.8
70°-80°	162.6	4.7
80°-90°	26.4	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°	1036.5	30.2
0°-40°	1682.1	48.9
0°-60°	2877.8	83.7
0°-90°	3437.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3437.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1364	1364	1364	1364	1364	
5°	1354	1351	1355	1350	1383	128
15°	1296	1282	1289	1296	1297	361
25°	1159	1166	1184	1200	1198	536
35°	1009	1012	1035	1059	1059	626
45°	812	827	841	862	842	628
55°	607	603	619	614	614	540
65°	373	368	382	368	370	371
75°	155	152	155	144	149	166
85°	19	18	19	18	18	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1363.7	1363.7	1363.7	1363.7	1363.7
2.5°	1375.5	1365.1	1355.4	1366.7	1373.6
5°	1354.0	1350.9	1354.6	1350.5	1383.1
7.5°	1326.2	1338.4	1345.4	1341.0	1342.9
10°	1311.4	1307.2	1322.9	1333.8	1332.2
12.5°	1295.6	1301.9	1302.8	1314.6	1315.6
15°	1296.5	1281.5	1289.4	1296.1	1296.6
17.5°	1246.1	1262.3	1267.8	1283.1	1264.1
20°	1239.9	1228.1	1239.9	1255.6	1253.1
22.5°	1202.1	1188.9	1214.2	1228.1	1227.3
25°	1159.1	1165.5	1184.5	1200.0	1197.5
27.5°	1121.4	1128.8	1155.9	1177.2	1163.5
30°	1092.4	1088.7	1111.6	1130.6	1141.2
32.5°	1040.4	1053.8	1080.6	1099.4	1089.4
35°	1008.9	1011.9	1035.3	1059.3	1058.6
37.5°	953.8	967.7	1000.6	1007.3	1001.2
40°	906.8	920.7	950.5	957.7	954.7
42.5°	872.1	874.6	900.1	908.4	895.2
45°	811.7	826.9	840.6	862.2	841.8
47.5°	760.3	767.3	796.9	802.7	792.0
50°	713.6	716.1	745.9	738.6	731.6
52.5°	655.0	665.4	682.1	680.7	672.4
55°	606.8	602.7	618.6	614.3	614.2
57.5°	548.8	555.9	568.9	562.2	551.5
60°	494.6	494.8	499.5	492.0	490.5
62.5°	434.2	436.3	437.4	428.0	443.2
65°	372.8	367.8	382.3	367.6	370.1
67.5°	316.2	318.7	317.3	308.1	311.7
70°	258.8	262.0	259.7	249.3	252.5
72.5°	206.4	202.5	205.0	191.9	197.9
75°	155.1	152.0	154.8	143.9	148.8
77.5°	105.6	108.1	106.4	100.5	103.9
80°	69.7	67.8	67.8	64.4	65.1
82.5°	40.7	38.7	38.2	37.2	38.7
85°	19.0	18.5	18.8	18.3	17.6
87.5°	6.9	7.0	7.0	6.7	6.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)