

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: P590388

Luminaire Tested: FSR-24-2-LD4-2STD-40-UNV-93-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590388
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-93-97-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3774.0 lumens
Efficiency: N/A
Efficacy: 113.3 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

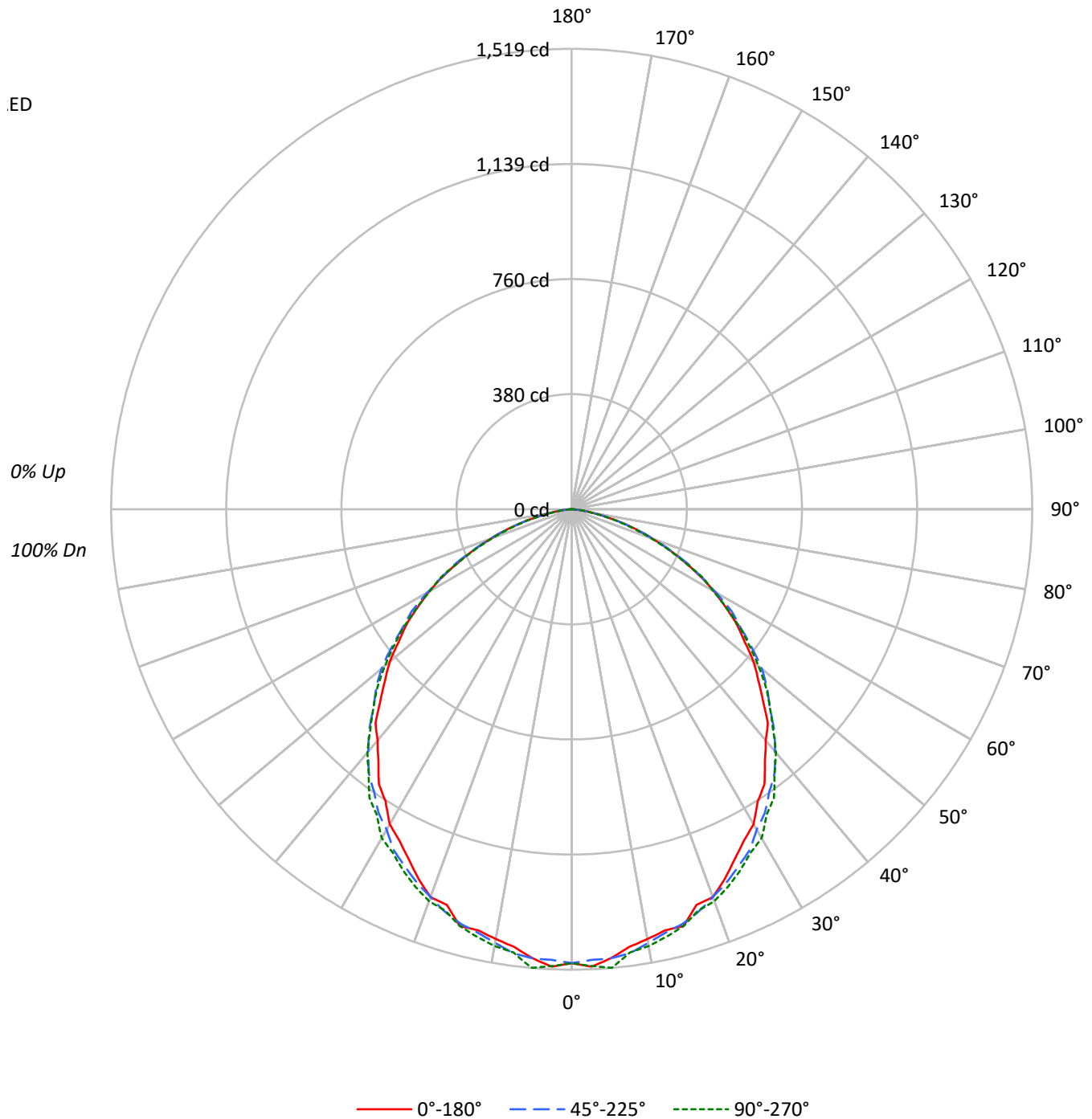
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4029	4029	4029
5°	4016	4018	4102
10°	3935	3969	3997
15°	3966	3944	3967
20°	3899	3899	3940
25°	3779	3862	3904
30°	3727	3793	3893
35°	3639	3734	3819
40°	3498	3666	3682
45°	3392	3513	3518
50°	3280	3429	3363
55°	3126	3187	3164
60°	2923	2952	2899
65°	2606	2672	2588
70°	2236	2244	2182
75°	1771	1766	1699
80°	1187	1153	1108
85°	645	639	596

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3603 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.9	3.7
10°-20°	399.2	10.6
20°-30°	598.1	15.8
30°-40°	708.8	18.8
40°-50°	710.2	18.8
50°-60°	602.8	16.0
60°-70°	406.4	10.8
70°-80°	178.6	4.7
80°-90°	29.0	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°	1138.1	30.2
0°-40°	1847.0	48.9
0°-60°	3160.0	83.7
0°-90°	3774.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3774.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1497	1497	1497	1497	1497	
5°	1487	1483	1487	1483	1519	140
15°	1424	1407	1416	1423	1424	397
25°	1273	1280	1301	1318	1315	588
35°	1108	1111	1137	1163	1162	688
45°	891	908	923	947	924	689
55°	666	662	679	675	674	593
65°	409	404	420	404	406	407
75°	170	167	170	158	163	183
85°	21	20	21	20	19	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1497.4	1497.4	1497.4	1497.4	1497.4
2.5°	1510.4	1499.0	1488.3	1500.7	1508.3
5°	1486.8	1483.3	1487.4	1482.9	1518.7
7.5°	1456.2	1469.6	1477.3	1472.5	1474.6
10°	1440.0	1435.4	1452.6	1464.6	1462.8
12.5°	1422.6	1429.6	1430.5	1443.5	1444.6
15°	1423.6	1407.1	1415.8	1423.2	1423.8
17.5°	1368.3	1386.1	1392.1	1408.9	1388.0
20°	1361.5	1348.6	1361.5	1378.7	1376.0
22.5°	1319.9	1305.4	1333.3	1348.6	1347.6
25°	1272.8	1279.7	1300.6	1317.6	1314.9
27.5°	1231.4	1239.5	1269.3	1292.7	1277.6
30°	1199.5	1195.4	1220.6	1241.4	1253.0
32.5°	1142.5	1157.1	1186.5	1207.2	1196.2
35°	1107.8	1111.1	1136.8	1163.1	1162.4
37.5°	1047.3	1062.6	1098.8	1106.1	1099.3
40°	995.7	1011.0	1043.7	1051.6	1048.3
42.5°	957.6	960.3	988.4	997.4	982.9
45°	891.3	907.9	923.0	946.8	924.4
47.5°	834.8	842.6	875.1	881.4	869.6
50°	783.6	786.3	819.0	811.1	803.3
52.5°	719.2	730.6	749.0	747.5	738.4
55°	666.3	661.8	679.2	674.6	674.4
57.5°	602.6	610.4	624.7	617.3	605.5
60°	543.1	543.3	548.5	540.2	538.6
62.5°	476.8	479.1	480.3	470.0	486.6
65°	409.3	403.9	419.7	403.7	406.4
67.5°	347.2	349.9	348.4	338.3	342.2
70°	284.2	287.7	285.2	273.8	277.3
72.5°	226.6	222.3	225.0	210.7	217.3
75°	170.3	166.9	169.9	158.0	163.4
77.5°	116.0	118.7	116.8	110.4	114.1
80°	76.6	74.4	74.4	70.8	71.5
82.5°	44.7	42.5	42.0	40.8	42.5
85°	20.9	20.3	20.7	20.1	19.3
87.5°	7.5	7.7	7.7	7.3	7.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)