

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: P590358

Luminaire Tested: FSR-24-2-LD4-2STD-40-UNV-80-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590358
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-80-85-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3863.0 lumens
Efficiency: N/A
Efficacy: 116.0 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

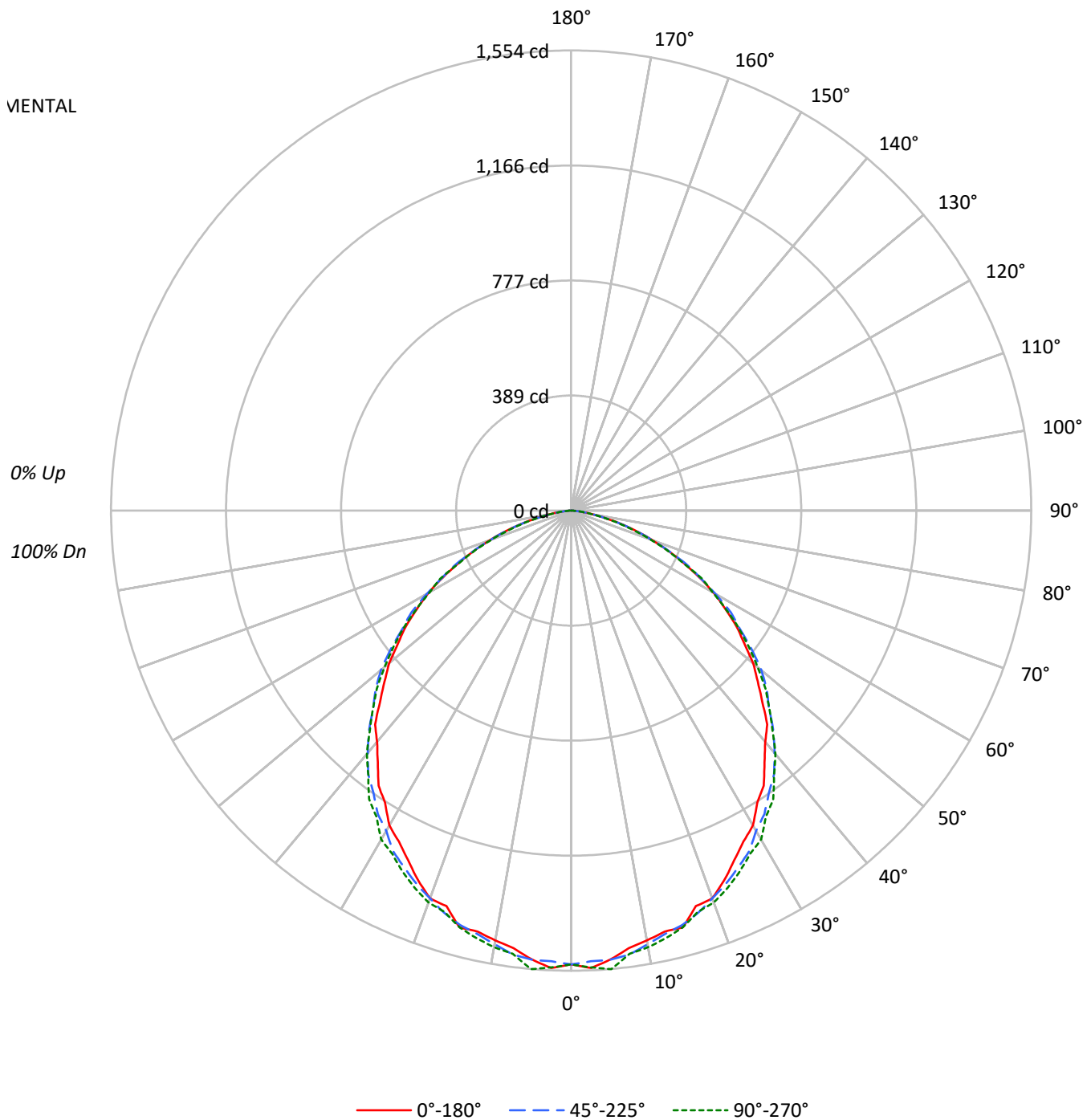
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4124	4124	4124
5°	4111	4112	4199
10°	4028	4063	4091
15°	4059	4037	4060
20°	3991	3991	4033
25°	3868	3953	3996
30°	3815	3882	3985
35°	3725	3823	3909
40°	3580	3753	3769
45°	3472	3596	3601
50°	3358	3509	3442
55°	3200	3262	3239
60°	2992	3021	2968
65°	2668	2735	2649
70°	2289	2297	2233
75°	1813	1809	1738
80°	1215	1181	1134
85°	661	655	611

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3688 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.2	3.7
10°-20°	408.6	10.6
20°-30°	612.2	15.8
30°-40°	725.6	18.8
40°-50°	726.9	18.8
50°-60°	617.0	16.0
60°-70°	416.0	10.8
70°-80°	182.8	4.7
80°-90°	29.7	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°	1165.0	30.2
0°-40°	1890.6	48.9
0°-60°	3234.5	83.7
0°-90°	3863.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3863.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1533	1533	1533	1533	1533	
5°	1522	1518	1522	1518	1554	143
15°	1457	1440	1449	1457	1457	406
25°	1303	1310	1331	1349	1346	602
35°	1134	1137	1164	1191	1190	704
45°	912	929	945	969	946	706
55°	682	677	695	690	690	607
65°	419	413	430	413	416	417
75°	174	171	174	162	167	187
85°	21	21	21	21	20	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1532.7	1532.7	1532.7	1532.7	1532.7
2.5°	1546.0	1534.3	1523.4	1536.1	1543.8
5°	1521.9	1518.3	1522.4	1517.9	1554.5
7.5°	1490.6	1504.2	1512.2	1507.2	1509.4
10°	1474.0	1469.2	1486.8	1499.1	1497.3
12.5°	1456.2	1463.3	1464.3	1477.5	1478.7
15°	1457.1	1440.3	1449.2	1456.7	1457.3
17.5°	1400.5	1418.8	1424.9	1442.1	1420.7
20°	1393.6	1380.4	1393.6	1411.2	1408.5
22.5°	1351.1	1336.2	1364.7	1380.4	1379.4
25°	1302.8	1309.9	1331.3	1348.7	1345.9
27.5°	1260.4	1268.7	1299.2	1323.2	1307.7
30°	1227.8	1223.6	1249.3	1270.7	1282.6
32.5°	1169.4	1184.4	1214.5	1235.7	1224.4
35°	1134.0	1137.3	1163.7	1190.6	1189.8
37.5°	1072.0	1087.7	1124.7	1132.2	1125.3
40°	1019.2	1034.8	1068.3	1076.4	1073.0
42.5°	980.2	983.0	1011.7	1021.0	1006.1
45°	912.3	929.3	944.8	969.1	946.2
47.5°	854.5	862.5	895.7	902.2	890.2
50°	802.1	804.9	838.3	830.2	822.3
52.5°	736.2	747.9	766.7	765.1	755.8
55°	682.0	677.4	695.2	690.5	690.3
57.5°	616.9	624.8	639.4	631.9	619.8
60°	555.9	556.1	561.4	552.9	551.4
62.5°	488.0	490.4	491.6	481.1	498.1
65°	419.0	413.4	429.6	413.2	416.0
67.5°	355.4	358.2	356.6	346.3	350.3
70°	290.9	294.5	291.9	280.2	283.8
72.5°	231.9	227.6	230.4	215.7	222.4
75°	174.4	170.8	174.0	161.7	167.2
77.5°	118.7	121.5	119.5	113.0	116.8
80°	78.4	76.2	76.2	72.4	73.2
82.5°	45.7	43.5	42.9	41.8	43.5
85°	21.4	20.8	21.2	20.6	19.8
87.5°	7.7	7.9	7.9	7.5	7.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)