

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: P590568

Luminaire Tested: FSR-24-2-LD4-3LO-40-UNV-82-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590568
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-LD4-3LO-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: 3850.0 lumens
Efficiency: N/A
Efficacy: 109.7 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

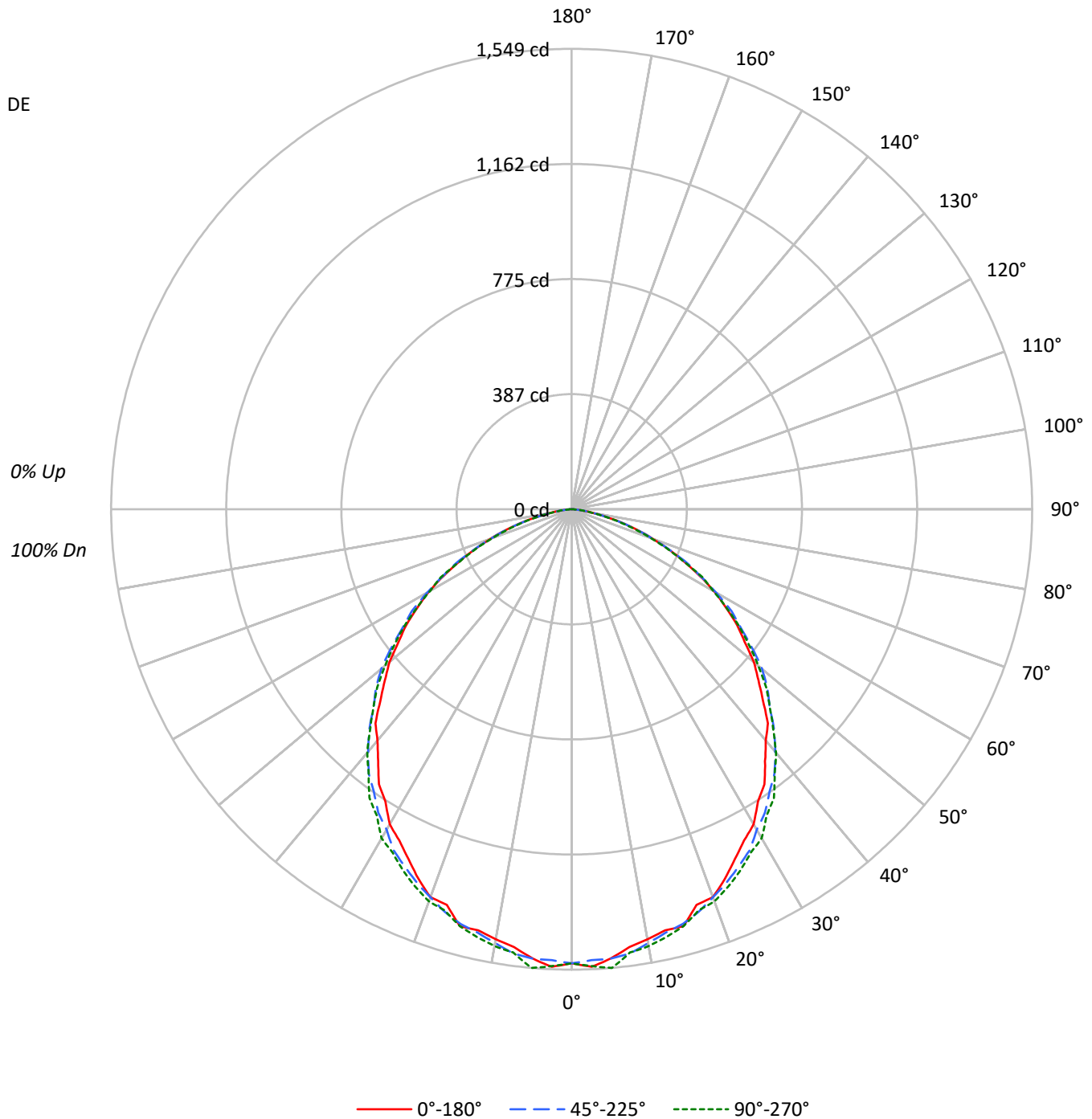
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4111	4111	4111
5°	4097	4099	4185
10°	4014	4049	4078
15°	4046	4024	4046
20°	3977	3977	4020
25°	3855	3939	3983
30°	3802	3869	3972
35°	3713	3810	3895
40°	3568	3740	3757
45°	3460	3583	3589
50°	3347	3498	3431
55°	3189	3251	3228
60°	2982	3012	2957
65°	2658	2727	2640
70°	2281	2289	2225
75°	1807	1803	1733
80°	1210	1176	1131
85°	658	651	608

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3676 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.7	3.7
10°-20°	407.2	10.6
20°-30°	610.1	15.8
30°-40°	723.1	18.8
40°-50°	724.5	18.8
50°-60°	615.0	16.0
60°-70°	414.6	10.8
70°-80°	182.2	4.7
80°-90°	29.6	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°	1161.1	30.2
0°-40°	1884.2	48.9
0°-60°	3223.6	83.7
0°-90°	3850.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3850.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1528	1528	1528	1528	1528	
5°	1517	1513	1517	1513	1549	143
15°	1452	1436	1444	1452	1452	405
25°	1298	1306	1327	1344	1341	600
35°	1130	1134	1160	1187	1186	702
45°	909	926	942	966	943	703
55°	680	675	693	688	688	605
65°	418	412	428	412	415	415
75°	174	170	173	161	167	186
85°	21	21	21	20	20	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1527.6	1527.6	1527.6	1527.6	1527.6
2.5°	1540.8	1529.2	1518.3	1530.9	1538.6
5°	1516.7	1513.2	1517.3	1512.8	1549.3
7.5°	1485.6	1499.2	1507.1	1502.1	1504.3
10°	1469.0	1464.3	1481.8	1494.1	1492.3
12.5°	1451.3	1458.4	1459.3	1472.6	1473.7
15°	1452.2	1435.5	1444.3	1451.8	1452.4
17.5°	1395.8	1414.0	1420.1	1437.2	1415.9
20°	1388.9	1375.7	1388.9	1406.5	1403.7
22.5°	1346.5	1331.7	1360.1	1375.7	1374.7
25°	1298.4	1305.5	1326.8	1344.2	1341.4
27.5°	1256.2	1264.5	1294.8	1318.7	1303.3
30°	1223.6	1219.5	1245.1	1266.4	1278.3
32.5°	1165.5	1180.4	1210.4	1231.5	1220.3
35°	1130.2	1133.5	1159.7	1186.6	1185.8
37.5°	1068.4	1084.0	1120.9	1128.4	1121.5
40°	1015.8	1031.3	1064.7	1072.8	1069.4
42.5°	976.9	979.7	1008.3	1017.5	1002.7
45°	909.3	926.2	941.6	965.9	943.0
47.5°	851.7	859.5	892.7	899.2	887.2
50°	799.4	802.2	835.5	827.4	819.5
52.5°	733.7	745.3	764.1	762.5	753.2
55°	679.7	675.1	692.9	688.2	688.0
57.5°	614.8	622.7	637.3	629.8	617.7
60°	554.0	554.2	559.6	551.1	549.5
62.5°	486.4	488.7	489.9	479.5	496.4
65°	417.5	412.0	428.2	411.8	414.6
67.5°	354.2	357.0	355.4	345.2	349.1
70°	289.9	293.5	290.9	279.3	282.8
72.5°	231.2	226.8	229.6	215.0	221.7
75°	173.8	170.2	173.4	161.1	166.7
77.5°	118.3	121.1	119.1	112.6	116.4
80°	78.1	75.9	75.9	72.2	73.0
82.5°	45.6	43.4	42.8	41.6	43.4
85°	21.3	20.7	21.1	20.5	19.7
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)