

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: P590535

Luminaire Tested: FSR-24-2-LD4-3LO-35-UNV-82-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590535
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-35-UNV-82-86-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

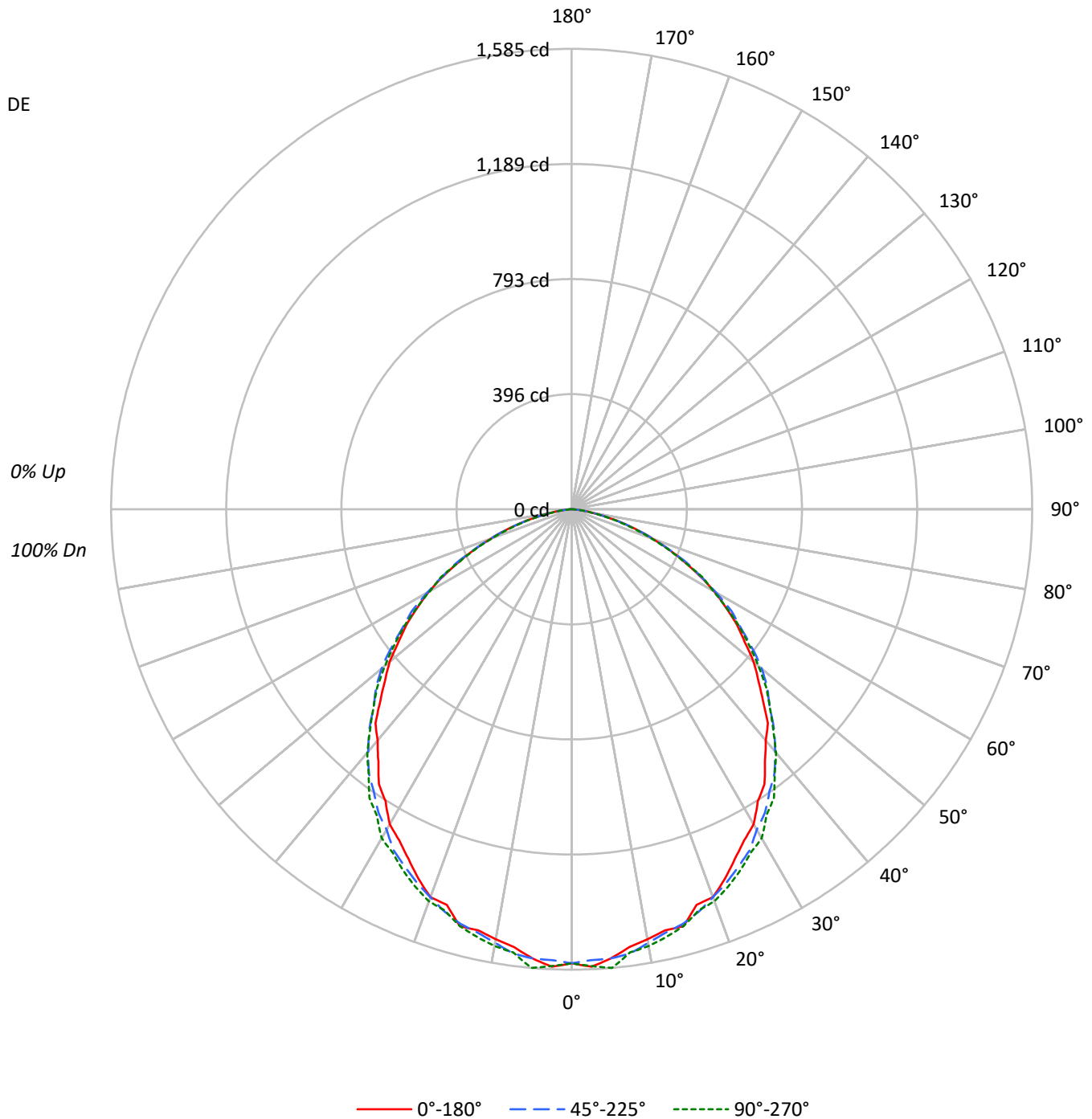
Lumens per Lamp: N/A
Luminaire Lumens: 3939.0 lumens
Efficiency: N/A
Efficacy: 112.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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																												
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°	4206	4206	4206
5°	4192	4193	4282
10°	4107	4143	4172
15°	4139	4117	4140
20°	4069	4069	4113
25°	3944	4031	4075
30°	3890	3958	4064
35°	3799	3898	3985
40°	3651	3827	3843
45°	3540	3666	3672
50°	3424	3579	3510
55°	3263	3326	3302
60°	3050	3081	3026
65°	2720	2790	2701
70°	2334	2341	2277
75°	1849	1844	1773
80°	1238	1204	1158
85°	673	667	624

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3761 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.0	3.7
10°-20°	416.7	10.6
20°-30°	624.2	15.8
30°-40°	739.8	18.8
40°-50°	741.2	18.8
50°-60°	629.2	16.0
60°-70°	424.2	10.8
70°-80°	186.4	4.7
80°-90°	30.3	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°	1187.9	30.2
0°-40°	1927.8	48.9
0°-60°	3298.1	83.7
0°-90°	3939.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3939.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1563	1563	1563	1563	1563	
5°	1552	1548	1552	1548	1585	146
15°	1486	1469	1478	1485	1486	414
25°	1328	1336	1358	1375	1372	614
35°	1156	1160	1186	1214	1213	718
45°	930	948	963	988	965	720
55°	695	691	709	704	704	619
65°	427	422	438	421	424	425
75°	178	174	177	165	170	191
85°	22	21	22	21	20	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1562.9	1562.9	1562.9	1562.9	1562.9
2.5°	1576.4	1564.5	1553.4	1566.3	1574.2
5°	1551.8	1548.2	1552.4	1547.8	1585.1
7.5°	1519.9	1533.8	1541.9	1536.9	1539.1
10°	1503.0	1498.1	1516.1	1528.6	1526.8
12.5°	1484.8	1492.1	1493.1	1506.6	1507.8
15°	1485.8	1468.7	1477.7	1485.4	1486.0
17.5°	1428.1	1446.7	1452.9	1470.5	1448.7
20°	1421.0	1407.5	1421.0	1439.0	1436.2
22.5°	1377.6	1362.5	1391.6	1407.5	1406.5
25°	1328.4	1335.7	1357.5	1375.2	1372.4
27.5°	1285.2	1293.7	1324.8	1349.2	1333.5
30°	1251.9	1247.7	1273.9	1295.7	1307.8
32.5°	1192.4	1207.7	1238.4	1260.0	1248.5
35°	1156.3	1159.7	1186.5	1214.0	1213.2
37.5°	1093.1	1109.1	1146.8	1154.5	1147.4
40°	1039.2	1055.2	1089.3	1097.6	1094.1
42.5°	999.5	1002.3	1031.6	1041.1	1025.9
45°	930.3	947.6	963.4	988.2	964.8
47.5°	871.3	879.4	913.3	920.0	907.7
50°	817.9	820.7	854.8	846.5	838.5
52.5°	750.7	762.6	781.8	780.1	770.7
55°	695.4	690.7	708.9	704.1	703.9
57.5°	629.0	637.1	652.0	644.3	632.0
60°	566.8	567.0	572.5	563.8	562.2
62.5°	497.6	500.0	501.3	490.6	507.9
65°	427.2	421.5	438.1	421.3	424.2
67.5°	362.4	365.2	363.6	353.1	357.2
70°	296.6	300.3	297.6	285.7	289.4
72.5°	236.5	232.1	234.9	220.0	226.8
75°	177.8	174.1	177.4	164.9	170.5
77.5°	121.1	123.9	121.9	115.2	119.1
80°	79.9	77.7	77.7	73.9	74.7
82.5°	46.6	44.4	43.8	42.6	44.4
85°	21.8	21.2	21.6	21.0	20.2
87.5°	7.9	8.1	8.1	7.7	7.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)