

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: P590533

Luminaire Tested: FSR-24-2-LD4-3LO-35-UNV-82-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590533
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-82-84-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

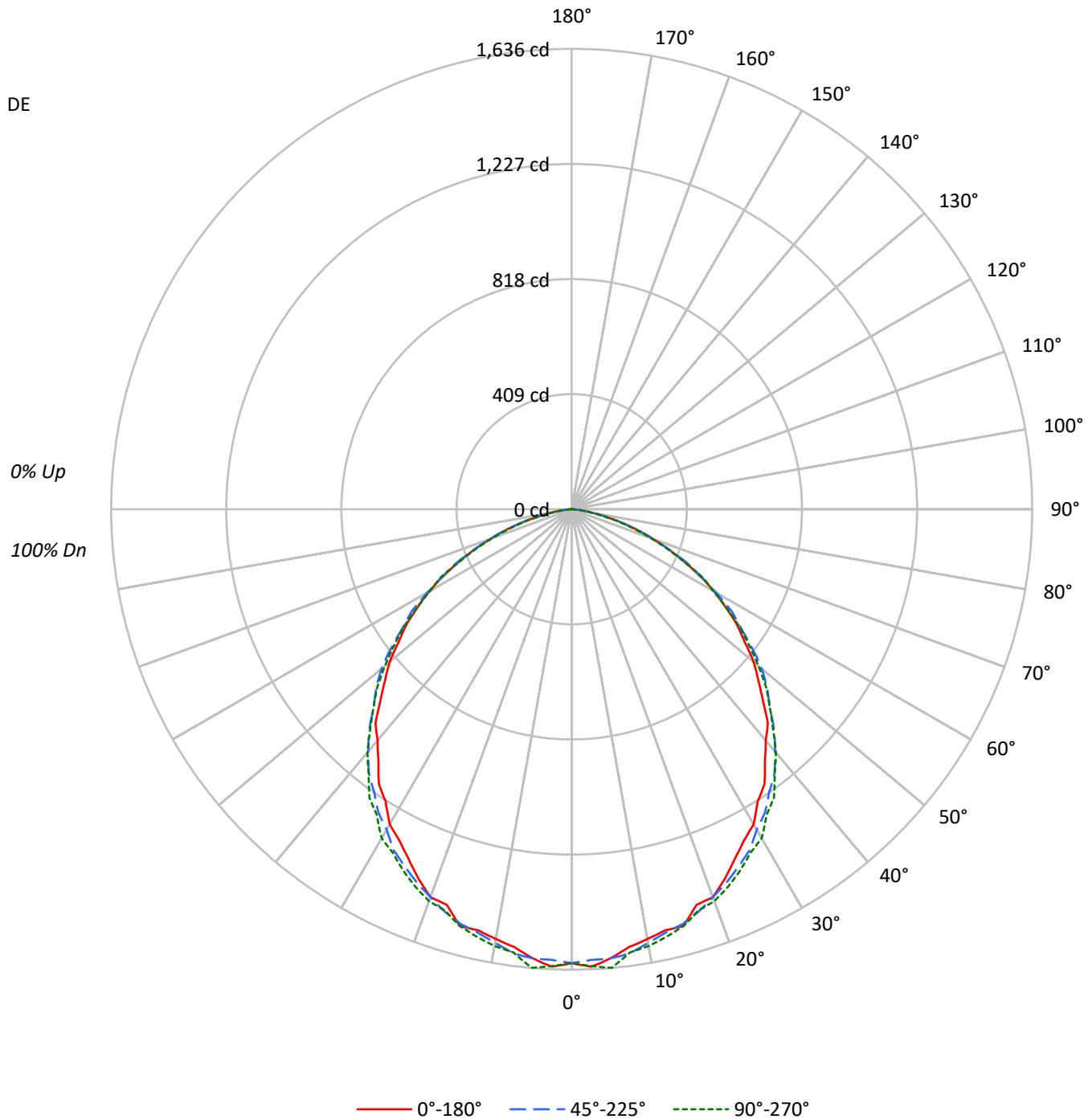
Lumens per Lamp: N/A
Luminaire Lumens: 4065.0 lumens
Efficiency: N/A
Efficacy: 115.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	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°	4340	4340	4340
5°	4326	4328	4419
10°	4238	4275	4305
15°	4272	4249	4272
20°	4200	4200	4244
25°	4070	4160	4205
30°	4015	4085	4194
35°	3920	4023	4113
40°	3768	3949	3966
45°	3653	3784	3789
50°	3533	3693	3623
55°	3367	3432	3408
60°	3148	3180	3123
65°	2807	2879	2787
70°	2408	2417	2349
75°	1908	1904	1830
80°	1278	1243	1195
85°	695	689	642

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3881 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.7	3.7
10°-20°	430.0	10.6
20°-30°	644.2	15.8
30°-40°	763.5	18.8
40°-50°	764.9	18.8
50°-60°	649.3	16.0
60°-70°	437.8	10.8
70°-80°	192.4	4.7
80°-90°	31.3	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°	1225.9	30.2
0°-40°	1989.4	48.9
0°-60°	3403.6	83.7
0°-90°	4065.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4065.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1613	1613	1613	1613	1613	
5°	1601	1598	1602	1597	1636	151
15°	1533	1516	1525	1533	1534	427
25°	1371	1378	1401	1419	1416	634
35°	1193	1197	1224	1253	1252	741
45°	960	978	994	1020	996	743
55°	718	713	732	727	726	638
65°	441	435	452	435	438	438
75°	184	180	183	170	176	197
85°	22	22	22	22	21	33
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1612.9	1612.9	1612.9	1612.9	1612.9
2.5°	1626.8	1614.6	1603.1	1616.4	1624.6
5°	1601.4	1597.7	1602.1	1597.3	1635.8
7.5°	1568.5	1582.9	1591.2	1586.0	1588.3
10°	1551.0	1546.0	1564.6	1577.5	1575.6
12.5°	1532.3	1539.8	1540.8	1554.8	1556.0
15°	1533.3	1515.6	1525.0	1532.9	1533.5
17.5°	1473.8	1492.9	1499.4	1517.5	1495.0
20°	1466.5	1452.5	1466.5	1485.0	1482.1
22.5°	1421.7	1406.1	1436.1	1452.5	1451.5
25°	1370.9	1378.4	1400.9	1419.2	1416.3
27.5°	1326.3	1335.1	1367.2	1392.4	1376.1
30°	1292.0	1287.6	1314.7	1337.2	1349.7
32.5°	1230.5	1246.4	1278.0	1300.3	1288.4
35°	1193.3	1196.8	1224.5	1252.8	1252.0
37.5°	1128.1	1144.5	1183.5	1191.4	1184.1
40°	1072.5	1088.9	1124.1	1132.7	1129.1
42.5°	1031.5	1034.4	1064.6	1074.4	1058.7
45°	960.0	977.9	994.2	1019.8	995.6
47.5°	899.2	907.5	942.5	949.4	936.7
50°	844.0	846.9	882.1	873.6	865.3
52.5°	774.7	787.0	806.8	805.1	795.3
55°	717.6	712.8	731.6	726.6	726.4
57.5°	649.1	657.4	672.9	664.9	652.2
60°	585.0	585.2	590.8	581.8	580.2
62.5°	513.5	516.0	517.3	506.3	524.2
65°	440.9	435.0	452.1	434.8	437.7
67.5°	374.0	376.9	375.3	364.4	368.6
70°	306.1	309.9	307.2	294.9	298.6
72.5°	244.1	239.5	242.4	227.0	234.1
75°	183.5	179.7	183.1	170.1	176.0
77.5°	124.9	127.9	125.8	118.9	122.9
80°	82.5	80.2	80.2	76.2	77.1
82.5°	48.1	45.8	45.2	43.9	45.8
85°	22.5	21.9	22.3	21.7	20.8
87.5°	8.1	8.3	8.3	7.9	7.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)