

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: P560419

Luminaire Tested: FSR-12-2-LD4-2LO-35-UNV-93-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560419
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-2-LD4-2LO-35-UNV-93-85-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2237.0 lumens
Efficiency: N/A
Efficacy: 95.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

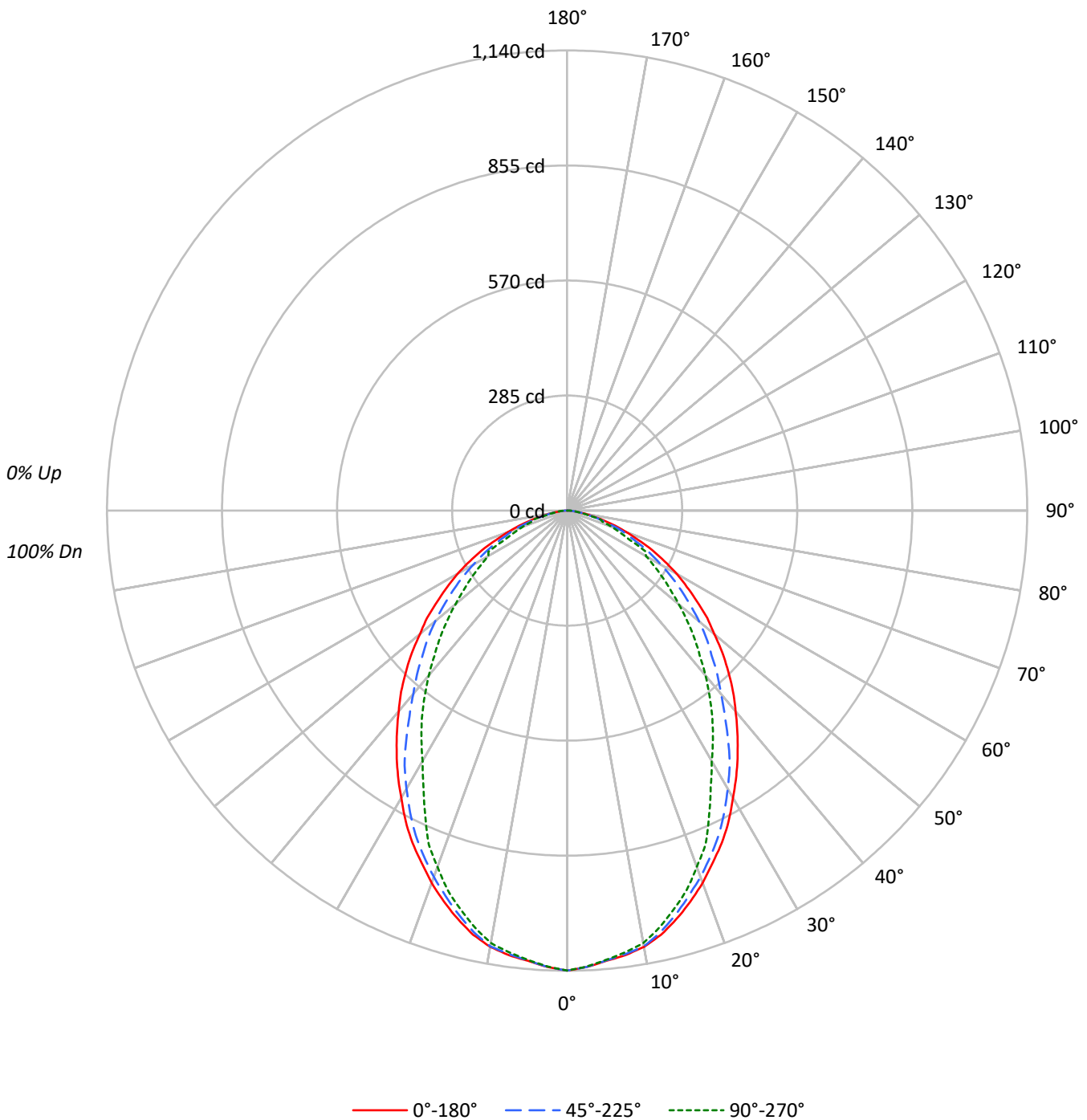
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P560419

CATALOG NUMBER: FSR-12-2-LD4-2LO-35-UNV-93-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P560419

CATALOG NUMBER: FSR-12-2-LD4-2LO-35-UNV-93-85-EDD

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													100															
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87													87															
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75													75															
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65													65															
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56													56															
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50													50															
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44													44															
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40													40															
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36													36															
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33													33															
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30													30															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6133	6133	6133
5°	6049	6042	6035
10°	5997	5990	5946
15°	5835	5776	5696
20°	5621	5530	5380
25°	5390	5273	4944
30°	5108	4945	4453
35°	4838	4570	4120
40°	4562	4165	3748
45°	4301	3851	3389
50°	3982	3574	3023
55°	3684	3238	2707
60°	3374	2892	2425
65°	2970	2533	2147
70°	2445	2219	1824
75°	1944	1699	1780
80°	1308	1224	1144
85°	815	976	1136

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4301 cd/sqm



TEST NUMBER: P560419

CATALOG NUMBER: FSR-12-2-LD4-2LO-35-UNV-93-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.1	4.7
10°-20°	291.1	13.0
20°-30°	403.0	18.0
30°-40°	429.7	19.2
40°-50°	392.0	17.5
50°-60°	307.1	13.7
60°-70°	200.2	8.9
70°-80°	88.7	4.0
80°-90°	19.0	0.9
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°	800.2	35.8
0°-40°	1229.9	55.0
0°-60°	1929.1	86.2
0°-90°	2237.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2237.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1140	1140	1140	1140	1140	
5°	1120	1118	1118	1117	1117	106
15°	1047	1047	1037	1026	1022	294
25°	908	902	888	856	833	417
35°	736	731	696	643	627	460
45°	565	553	506	464	445	435
55°	393	381	345	304	288	352
65°	233	220	199	203	169	230
75°	94	87	82	78	86	100
85°	13	14	16	17	18	18
90°	0	0	0	0	0	



TEST NUMBER: P560419

CATALOG NUMBER: FSR-12-2-LD4-2LO-35-UNV-93-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	<i>1139.5</i>	<i>1139.5</i>	<i>1139.5</i>	<i>1139.5</i>	<i>1139.5</i>
2.5°	<i>1131.6</i>	1131.6	1131.6	1130.3	1130.3
5°	<i>1119.7</i>	1118.4	1118.4	1117.1	1117.1
7.5°	<i>1110.5</i>	1109.2	1107.9	1106.6	1103.9
10°	<i>1097.3</i>	1097.3	1096.0	1089.4	1088.1
12.5°	<i>1076.3</i>	1074.9	1069.7	1060.5	1057.8
15°	<i>1047.3</i>	1047.3	1036.7	1026.2	1022.3
17.5°	<i>1015.7</i>	1014.4	1001.2	990.6	985.4
20°	<i>981.4</i>	978.8	965.6	948.5	939.3
22.5°	<i>943.2</i>	943.2	927.4	905.0	895.8
25°	<i>907.6</i>	902.4	887.9	856.3	832.6
27.5°	<i>866.8</i>	858.9	843.1	798.3	770.6
30°	<i>822.0</i>	818.1	795.7	737.7	716.6
32.5°	<i>779.9</i>	773.3	749.6	689.0	671.8
35°	<i>736.4</i>	731.1	695.6	642.9	627.1
37.5°	<i>692.9</i>	686.3	641.5	599.4	579.6
40°	<i>649.4</i>	641.5	592.8	554.6	533.5
42.5°	<i>608.6</i>	598.1	550.6	509.8	486.1
45°	<i>565.1</i>	553.3	505.9	463.7	445.3
47.5°	<i>521.7</i>	511.1	467.7	424.2	403.1
50°	<i>475.6</i>	466.3	426.8	383.3	361.0
52.5°	<i>437.4</i>	422.9	384.7	341.2	322.7
55°	<i>392.6</i>	380.7	345.1	304.3	288.5
57.5°	<i>351.7</i>	339.9	306.9	268.7	255.6
60°	<i>313.5</i>	296.4	268.7	235.8	225.3
62.5°	<i>271.4</i>	258.2	234.5	206.8	220.0
65°	<i>233.2</i>	220.0	198.9	202.9	168.6
67.5°	<i>191.0</i>	184.4	166.0	147.5	142.3
70°	<i>155.4</i>	147.5	141.0	121.2	115.9
72.5°	<i>123.8</i>	115.9	106.7	96.2	92.2
75°	<i>93.5</i>	86.9	81.7	77.7	85.6
77.5°	<i>64.5</i>	61.9	58.0	54.0	52.7
80°	<i>42.2</i>	40.8	39.5	38.2	36.9
82.5°	<i>25.0</i>	25.0	25.0	25.0	25.0
85°	<i>13.2</i>	14.5	15.8	17.1	18.4
87.5°	<i>7.9</i>	7.9	9.2	10.5	11.9
90°	<i>0.0</i>	0.0	0.0	0.0	0.0

(END OF REPORT)