

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P302533

Luminaire Tested: **FSP-22-21-40-CP187**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P302533  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1905-304-11)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FSP-22-21-40-CP187  
Description: 2x2 Fail Safe Flat Panel Clear Polycarbonate Lens .187"  
Light Source: (126) 4000 CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: 

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

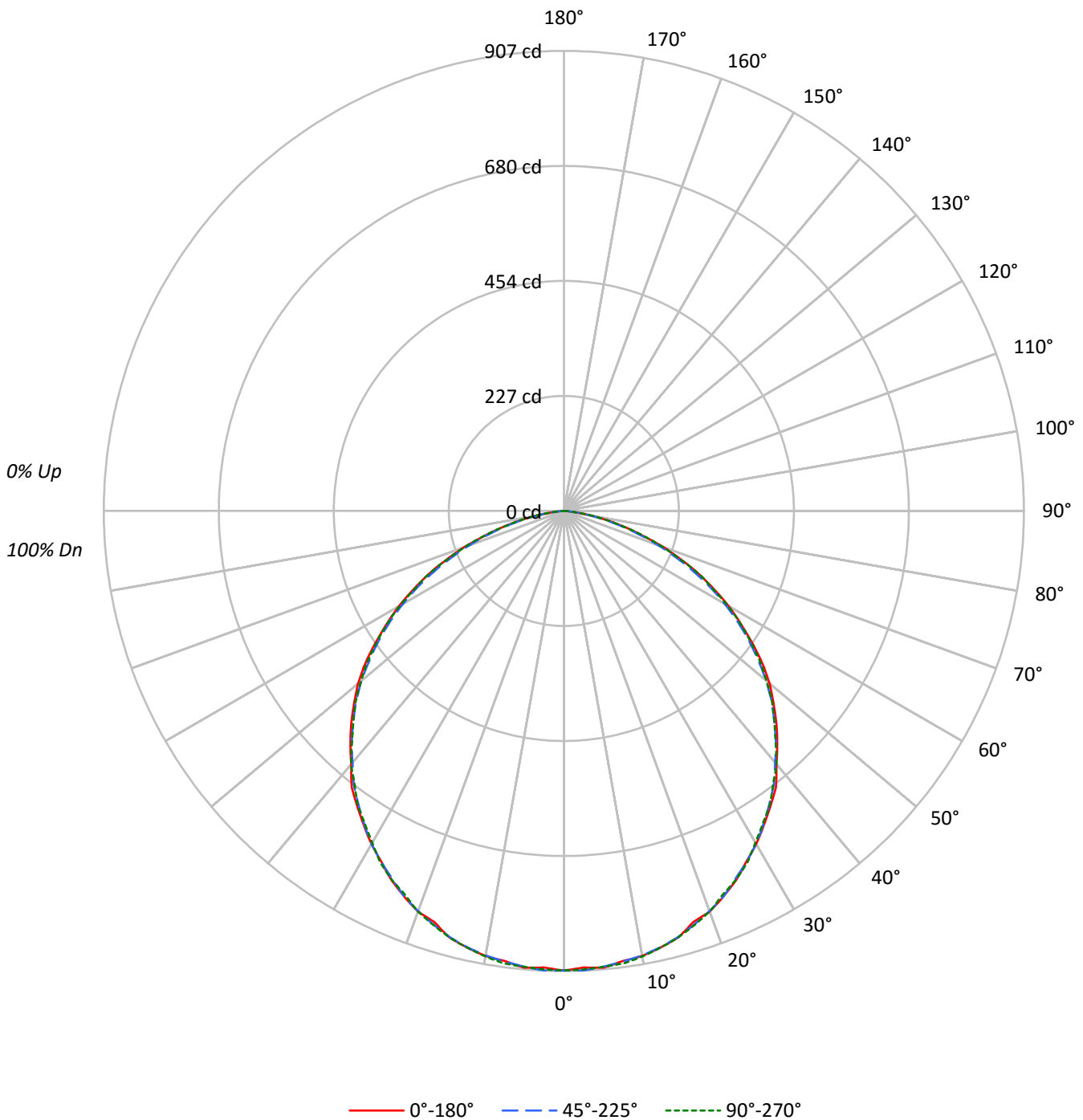
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2436.5 lumens  
Efficiency: N/A  
Efficacy: 118.3 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.24 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 20.6  
Input Voltage (V): NR  
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: 25 FT



TEST NUMBER: P302533  
CATALOG NUMBER: FSP-22-21-40-CP187

### Luminous Intensity Polar Plot





TEST NUMBER: P302533

CATALOG NUMBER: FSP-22-21-40-CP187

**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	109	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	77	74	71
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	67	63	61
4	84	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54	52
5	77	64	55	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45
6	71	58	49	43	69	57	49	42	55	48	42	53	47	42	52	46	41	39
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35
8	61	48	39	34	60	47	39	34	46	39	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	27	52	40	33	27	39	32	27	38	32	27	37	31	27	25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2437	2437	2437
5°	2441	2436	2436
10°	2434	2431	2437
15°	2426	2423	2426
20°	2407	2404	2407
25°	2386	2377	2383
30°	2357	2357	2347
35°	2333	2320	2326
40°	2290	2276	2290
45°	2256	2233	2233
50°	2218	2179	2184
55°	2127	2090	2108
60°	2019	1970	2003
65°	1871	1795	1871
70°	1642	1563	1633
75°	1345	1252	1314
80°	917	871	933
85°	401	432	432



TEST NUMBER: P302533

CATALOG NUMBER: FSP-22-21-40-CP187

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.8	3.5
10°-20°	245.3	10.1
20°-30°	369.4	15.2
30°-40°	442.6	18.2
40°-50°	454.3	18.6
50°-60°	400.2	16.4
60°-70°	283.9	11.7
70°-80°	133.8	5.5
80°-90°	21.1	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°	700.5	28.8
0°-40°	1143.1	46.9
0°-60°	1997.7	82.0
0°-90°	2436.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2436.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	906	906	906	906	906	
5°	904	906	902	902	902	86
15°	871	869	870	870	871	245
25°	804	804	800	802	802	370
35°	710	708	706	706	708	444
45°	593	591	587	590	587	457
55°	453	449	445	448	449	405
65°	294	286	282	289	294	289
75°	129	123	120	126	126	137
85°	13	13	14	14	14	21
90°	0	0	0	0	0	



TEST NUMBER: P302533

CATALOG NUMBER: FSP-22-21-40-CP187

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	905.8	905.8	905.8	905.8	905.8
2.5°	900.8	907.8	906.8	904.8	904.8
5°	903.8	905.8	901.8	901.8	901.8
7.5°	894.8	898.8	895.8	895.8	899.8
10°	890.8	892.8	889.8	889.8	891.8
12.5°	881.7	882.8	880.7	880.7	881.7
15°	870.7	868.7	869.7	869.7	870.7
17.5°	849.6	857.7	854.7	857.7	855.7
20°	840.6	841.6	839.6	838.6	840.6
22.5°	822.6	819.6	822.6	820.6	818.6
25°	803.5	803.5	800.5	802.5	802.5
27.5°	779.4	780.4	779.4	779.4	782.4
30°	758.4	758.4	758.4	757.4	755.4
32.5°	734.3	734.3	732.3	733.3	730.3
35°	710.2	708.2	706.2	706.2	708.2
37.5°	687.1	683.1	680.1	680.1	678.1
40°	652.0	654.0	648.0	649.0	652.0
42.5°	622.9	622.9	618.9	621.9	617.9
45°	592.8	590.8	586.8	589.8	586.8
47.5°	560.7	557.7	555.7	554.7	556.7
50°	529.7	522.6	520.6	521.6	521.6
52.5°	493.5	486.5	482.5	485.5	487.5
55°	453.4	449.4	445.4	448.4	449.4
57.5°	413.3	409.3	406.3	408.3	412.3
60°	375.2	369.2	366.1	370.2	372.2
62.5°	334.0	328.0	325.0	331.0	330.0
65°	293.9	285.9	281.9	288.9	293.9
67.5°	249.8	244.8	239.7	246.8	247.8
70°	208.7	200.6	198.6	207.6	207.6
72.5°	165.5	162.5	158.5	165.5	167.5
75°	129.4	123.4	120.4	126.4	126.4
77.5°	91.3	88.3	86.3	91.3	93.3
80°	59.2	56.2	56.2	58.2	60.2
82.5°	32.1	32.1	31.1	33.1	34.1
85°	13.0	13.0	14.0	14.0	14.0
87.5°	3.0	3.0	3.0	3.0	3.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)