

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: P302521

Luminaire Tested: **FSP-22-21-30-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: P302521
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-22-21-30-CP187
Description: 2x2 Fail Safe Flat Panel Clear Polycarbonate Lens .187"
Light Source: (126) 3000 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

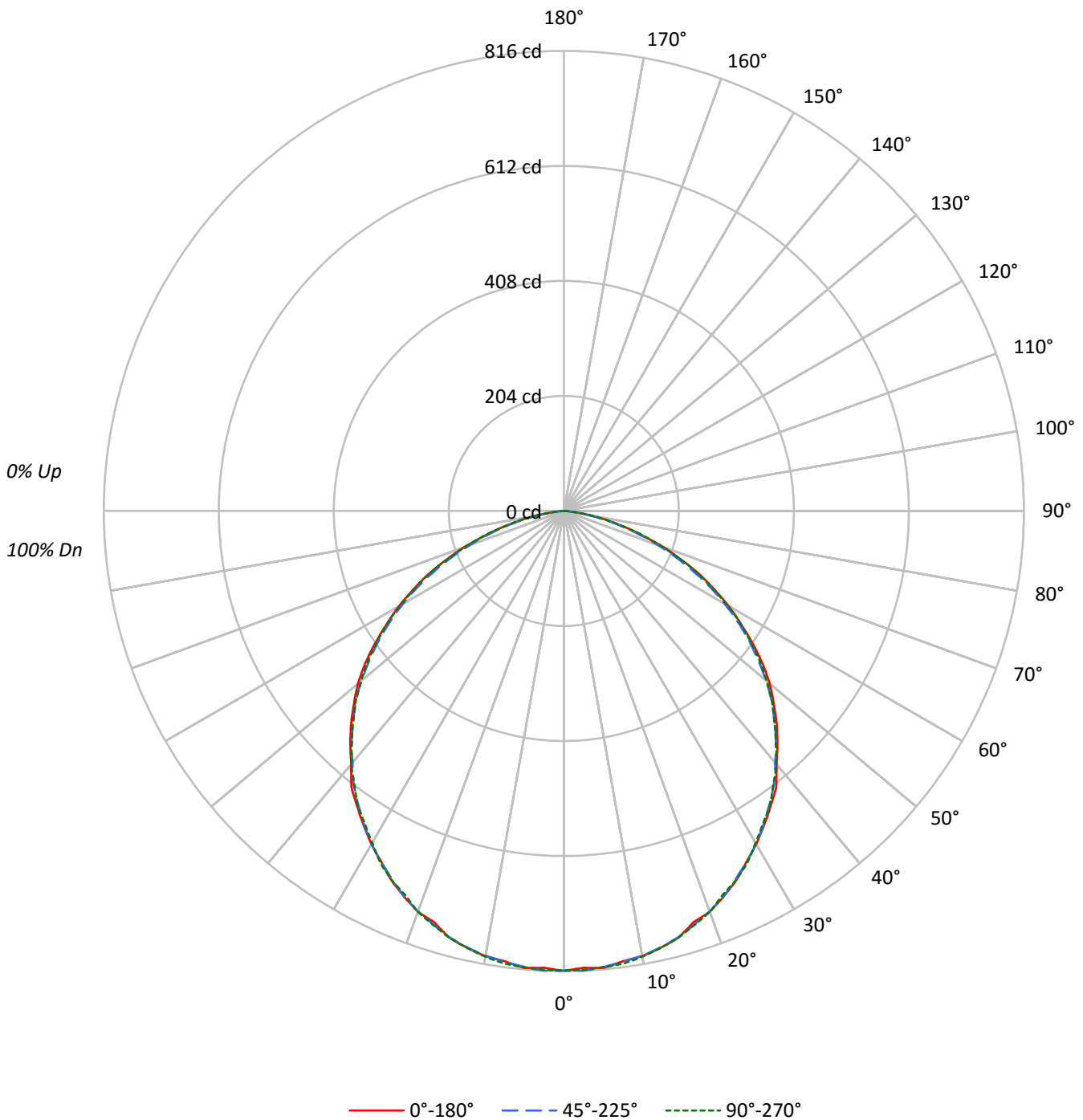
Lumens per Lamp: N/A
Luminaire Lumens: 2193.2 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.24 / 1.36
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 20.7
Input Voltage (V): NR
Input Current (A_{in}): 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



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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	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°	2194	2194	2194
5°	2198	2193	2193
10°	2191	2188	2193
15°	2184	2181	2184
20°	2167	2164	2167
25°	2148	2140	2145
30°	2121	2121	2113
35°	2100	2088	2094
40°	2062	2049	2062
45°	2031	2010	2010
50°	1996	1962	1966
55°	1915	1881	1898
60°	1817	1774	1803
65°	1685	1615	1685
70°	1478	1407	1471
75°	1211	1127	1183
80°	826	784	840
85°	361	389	389



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.2	3.5
10°-20°	220.8	10.1
20°-30°	332.5	15.2
30°-40°	398.4	18.2
40°-50°	409.0	18.6
50°-60°	360.2	16.4
60°-70°	255.6	11.7
70°-80°	120.4	5.5
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°	630.6	28.8
0°-40°	1029.0	46.9
0°-60°	1798.2	82.0
0°-90°	2193.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2193.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	815	815	815	815	815	
5°	814	815	812	812	812	77
15°	784	782	783	783	784	220
25°	723	723	721	722	722	333
35°	639	638	636	636	638	400
45°	534	532	528	531	528	411
55°	408	404	401	404	404	365
65°	265	257	254	260	265	260
75°	116	111	108	114	114	123
85°	12	12	13	13	13	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	815.4	815.4	815.4	815.4	815.4
2.5°	810.9	817.2	816.3	814.5	814.5
5°	813.6	815.4	811.8	811.8	811.8
7.5°	805.4	809.0	806.3	806.3	809.9
10°	801.8	803.6	800.9	800.9	802.7
12.5°	793.7	794.6	792.8	792.8	793.7
15°	783.8	782.0	782.9	782.9	783.8
17.5°	764.8	772.0	769.3	772.0	770.2
20°	756.7	757.6	755.8	754.9	756.7
22.5°	740.4	737.7	740.4	738.6	736.8
25°	723.3	723.3	720.6	722.4	722.4
27.5°	701.6	702.5	701.6	701.6	704.3
30°	682.6	682.6	682.6	681.7	679.9
32.5°	661.0	661.0	659.2	660.1	657.3
35°	639.3	637.5	635.7	635.7	637.5
37.5°	618.5	614.9	612.2	612.2	610.4
40°	586.9	588.7	583.3	584.2	586.9
42.5°	560.7	560.7	557.1	559.8	556.2
45°	533.6	531.8	528.2	530.9	528.2
47.5°	504.8	502.0	500.2	499.3	501.1
50°	476.8	470.4	468.6	469.5	469.5
52.5°	444.3	437.9	434.3	437.0	438.8
55°	408.1	404.5	400.9	403.6	404.5
57.5°	372.0	368.4	365.7	367.5	371.1
60°	337.7	332.3	329.6	333.2	335.0
62.5°	300.7	295.3	292.6	298.0	297.1
65°	264.6	257.3	253.7	260.1	264.6
67.5°	224.8	220.3	215.8	222.1	223.0
70°	187.8	180.6	178.8	186.9	186.9
72.5°	149.0	146.3	142.7	149.0	150.8
75°	116.5	111.1	108.4	113.8	113.8
77.5°	82.2	79.5	77.7	82.2	84.0
80°	53.3	50.6	50.6	52.4	54.2
82.5°	28.9	28.9	28.0	29.8	30.7
85°	11.7	11.7	12.6	12.6	12.6
87.5°	2.7	2.7	2.7	2.7	2.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)