

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: P302534

Luminaire Tested: **FSP-22-21-40-CP250**

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: P302534
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1905-304-12)
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-CP250
Description: 2x2 Fail Safe Flat Panel Clear Polycarbonate Lens .25"
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

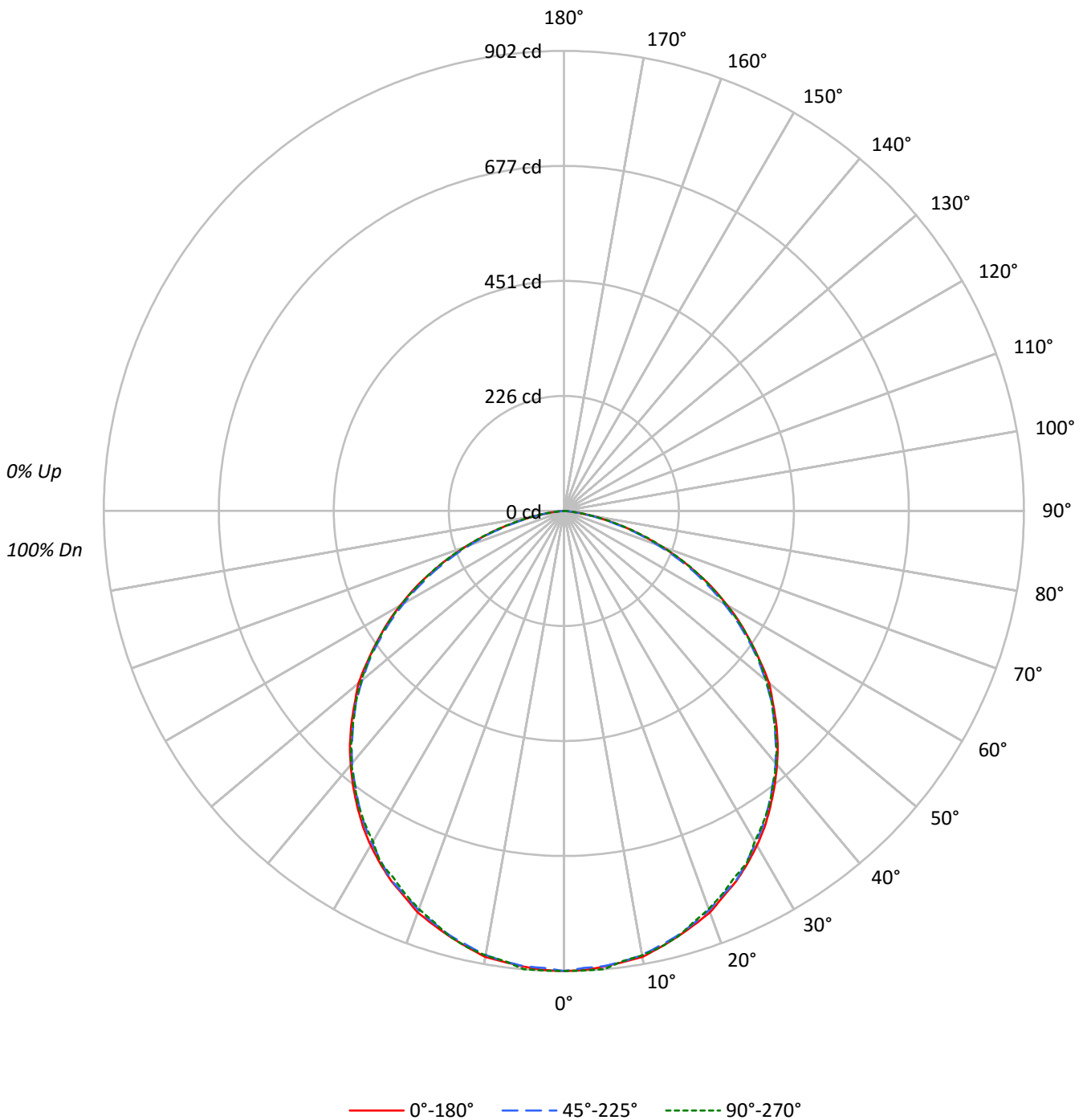
Lumens per Lamp: N/A
Luminaire Lumens: 2416.5 lumens
Efficiency: N/A
Efficacy: 117.3 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.24 / 1.35
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 20.6
Input Voltage (V): NR
Input Current (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	87	81	77	83	79	75	80	77	74	72
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	71	62	56	68	61	56	66	60	55	64	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	43	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	28	52	40	33	27	39	32	27	38	32	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2427	2427	2427
5°	2422	2420	2436
10°	2426	2415	2417
15°	2406	2401	2406
20°	2399	2384	2379
25°	2377	2374	2353
30°	2353	2338	2325
35°	2320	2303	2310
40°	2283	2269	2276
45°	2241	2218	2222
50°	2200	2159	2171
55°	2099	2071	2094
60°	1992	1949	1981
65°	1833	1789	1840
70°	1610	1555	1618
75°	1304	1231	1325
80°	886	840	917
85°	401	371	401



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.2	3.5
10°-20°	243.4	10.1
20°-30°	367.2	15.2
30°-40°	439.9	18.2
40°-50°	451.4	18.7
50°-60°	396.9	16.4
60°-70°	280.6	11.6
70°-80°	131.3	5.4
80°-90°	20.5	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°	695.8	28.8
0°-40°	1135.7	47.0
0°-60°	1984.0	82.1
0°-90°	2416.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2416.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	902	902	902	902	902	
5°	897	898	896	897	902	85
15°	864	864	862	861	864	244
25°	800	798	800	794	792	369
35°	706	706	701	701	703	442
45°	589	587	583	584	584	454
55°	447	444	441	445	446	400
65°	288	284	281	285	289	285
75°	125	120	118	124	127	134
85°	13	13	12	14	13	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	901.8	901.8	901.8	901.8	901.8
2.5°	900.8	899.8	896.8	899.8	901.8
5°	896.8	897.8	895.8	896.8	901.8
7.5°	891.8	892.8	890.8	890.8	889.7
10°	887.7	887.7	883.7	883.7	884.7
12.5°	875.7	877.7	872.7	874.7	875.7
15°	863.7	863.7	861.7	860.7	863.7
17.5°	850.6	850.6	847.6	847.6	845.6
20°	837.6	835.6	832.6	829.6	830.6
22.5°	817.5	818.5	814.5	814.5	812.5
25°	800.5	798.5	799.5	794.5	792.4
27.5°	779.4	778.4	775.4	775.4	777.4
30°	757.3	754.3	752.3	750.3	748.3
32.5°	733.3	731.3	728.2	727.2	726.2
35°	706.2	706.2	701.2	701.2	703.2
37.5°	679.1	681.1	673.1	674.1	674.1
40°	650.0	651.0	646.0	647.0	648.0
42.5°	620.9	618.9	614.9	617.9	616.9
45°	588.8	586.8	582.8	583.8	583.8
47.5°	555.7	553.7	551.7	551.7	552.7
50°	525.6	519.6	515.6	516.6	518.6
52.5°	485.5	484.5	480.5	481.5	483.5
55°	447.4	444.4	441.4	445.4	446.4
57.5°	410.3	407.3	403.2	405.3	408.3
60°	370.1	365.1	362.1	365.1	368.1
62.5°	331.0	324.0	321.0	325.0	328.0
65°	287.9	283.9	280.9	284.9	288.9
67.5°	246.8	239.7	238.7	244.8	247.8
70°	204.6	197.6	197.6	202.6	205.6
72.5°	163.5	156.5	157.5	163.5	166.5
75°	125.4	120.4	118.4	124.4	127.4
77.5°	89.3	84.3	84.3	90.3	90.3
80°	57.2	54.2	54.2	58.2	59.2
82.5°	32.1	31.1	30.1	32.1	33.1
85°	13.0	13.0	12.0	14.0	13.0
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)