

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: P312711

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-RDP-CP250-W2A-U-3500K**

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: P312711
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-39HE-UNV-L83050-RDP-CP250-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 3500K TUNABLE 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: 2203.0 lumens
Efficiency: N/A
Efficacy: 68.0 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

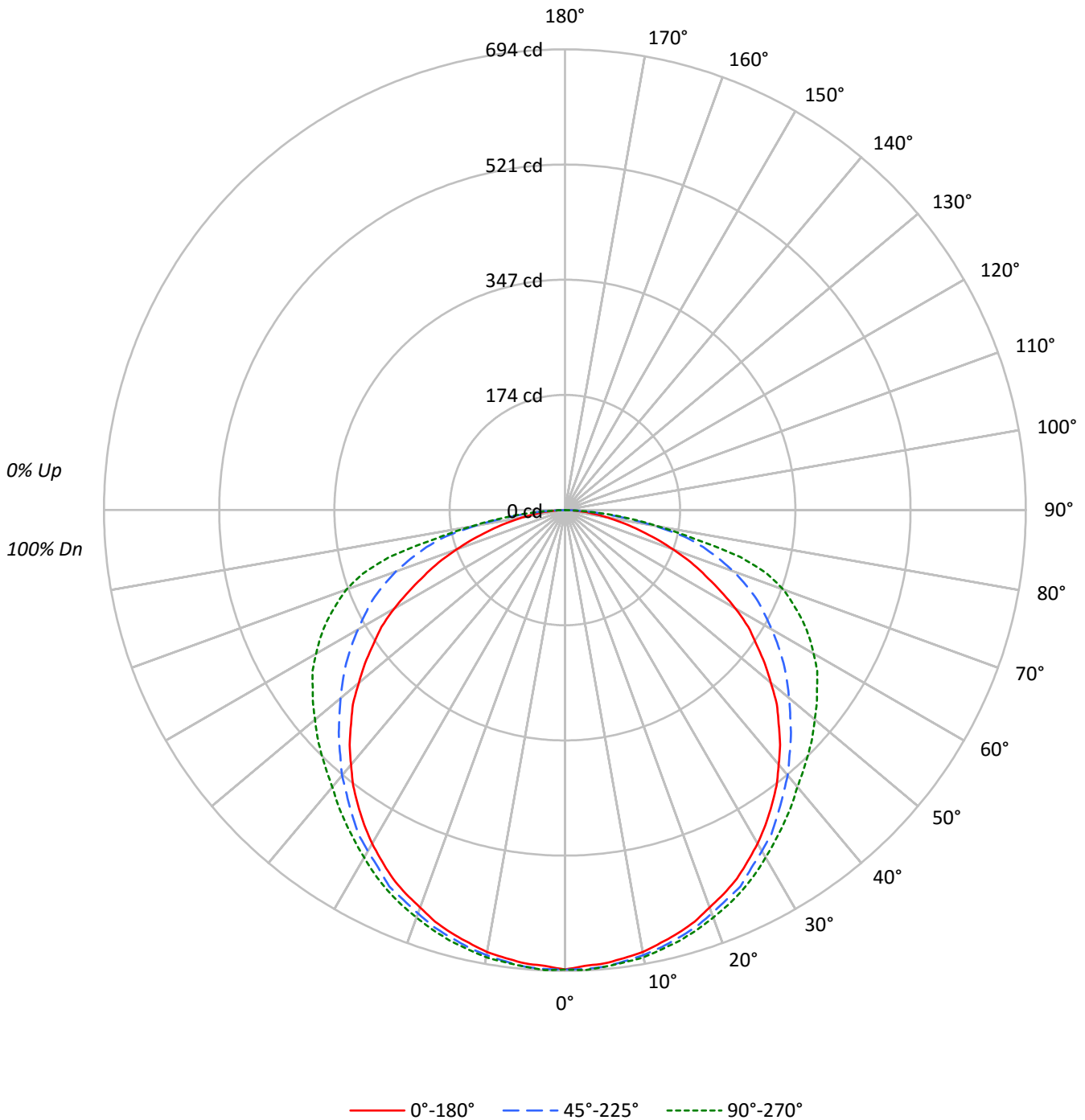
Input Watts (W): 32.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1862	1862	1862
5°	1852	1865	1865
10°	1847	1860	1869
15°	1838	1856	1869
20°	1824	1852	1870
25°	1819	1858	1877
30°	1803	1843	1878
35°	1783	1837	1890
40°	1759	1833	1913
45°	1733	1832	1974
50°	1696	1845	2056
55°	1650	1886	2175
60°	1596	1936	2329
65°	1486	2033	2518
70°	1364	2129	2755
75°	1197	2241	2848
80°	1029	2135	2235
85°	902	1550	1701



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.5	3.0
10°-20°	187.9	8.5
20°-30°	286.7	13.0
30°-40°	350.1	15.9
40°-50°	374.4	17.0
50°-60°	361.3	16.4
60°-70°	311.1	14.1
70°-80°	210.5	9.6
80°-90°	55.5	2.5
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°	540.1	24.5
0°-40°	890.3	40.4
0°-60°	1626.0	73.8
0°-90°	2203.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2203.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	692	692	692	692	692	
5°	686	687	690	690	690	65
15°	660	661	666	669	671	186
25°	613	616	626	629	632	282
35°	543	548	559	570	575	340
45°	455	464	481	506	519	352
55°	352	363	402	442	464	315
65°	233	256	319	370	395	232
75°	115	152	216	259	274	123
85°	29	40	50	52	55	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	692.0	692.0	692.0	692.0	692.0
2.5°	687.1	688.8	692.0	692.0	693.6
5°	685.5	687.1	690.4	690.4	690.4
7.5°	680.7	682.3	685.5	687.1	687.1
10°	675.8	677.4	680.7	682.3	683.9
12.5°	667.7	669.3	674.2	677.4	677.4
15°	659.6	661.2	666.1	669.3	670.9
17.5°	649.9	653.1	658.0	661.2	662.8
20°	636.9	640.1	646.6	651.5	653.1
22.5°	625.6	628.8	635.3	640.1	643.4
25°	612.6	615.8	625.6	628.8	632.0
27.5°	596.4	599.6	607.7	614.2	619.1
30°	580.2	583.4	593.1	601.2	604.5
32.5°	562.4	567.2	578.6	585.0	589.9
35°	542.9	547.8	559.1	570.5	575.3
37.5°	523.5	528.3	539.7	554.2	560.7
40°	500.8	507.3	521.8	541.3	544.5
42.5°	479.7	487.8	500.8	523.5	531.6
45°	455.4	463.5	481.3	505.6	518.6
47.5°	432.7	440.8	460.3	489.4	505.6
50°	405.2	416.5	440.8	474.8	491.0
52.5°	379.2	388.9	421.4	458.6	478.1
55°	351.7	363.0	401.9	442.4	463.5
57.5°	327.4	337.1	380.8	426.2	450.5
60°	296.6	309.5	359.8	408.4	432.7
62.5°	264.2	283.6	338.7	388.9	414.9
65°	233.4	256.1	319.3	369.5	395.4
67.5°	205.8	230.1	295.0	348.4	372.7
70°	173.4	204.2	270.6	322.5	350.1
72.5°	144.2	178.3	243.1	295.0	319.3
75°	115.1	152.3	215.5	259.3	273.9
77.5°	89.1	124.8	184.7	197.7	199.3
80°	66.4	98.9	137.8	139.4	144.2
82.5°	45.4	69.7	89.1	97.2	98.9
85°	29.2	40.5	50.2	51.9	55.1
87.5°	13.0	14.6	17.8	16.2	16.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)