

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: P312710

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-RDP-CP250-W2A-U-3000K**

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: P312710
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-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 3000K 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: 2082.0 lumens
Efficiency: N/A
Efficacy: 64.5 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

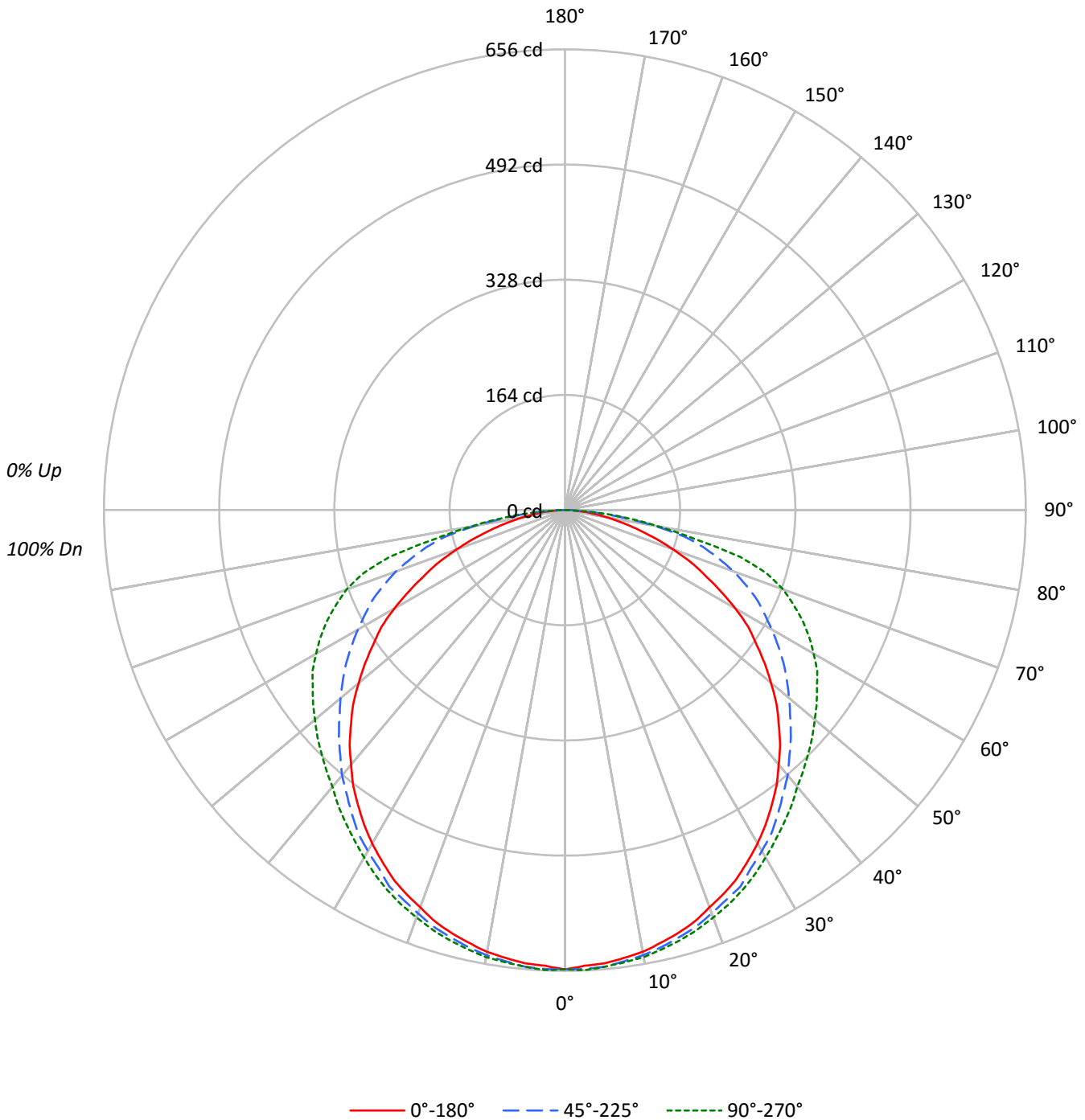
Input Watts (W): 32.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1760	1760	1760
5°	1750	1763	1763
10°	1745	1758	1766
15°	1737	1754	1767
20°	1724	1750	1767
25°	1719	1755	1773
30°	1704	1742	1775
35°	1686	1736	1786
40°	1663	1733	1808
45°	1638	1731	1865
50°	1603	1744	1943
55°	1559	1782	2055
60°	1509	1830	2201
65°	1405	1921	2379
70°	1290	2013	2603
75°	1130	2118	2691
80°	973	2018	2112
85°	852	1467	1609



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.9	3.0
10°-20°	177.6	8.5
20°-30°	271.0	13.0
30°-40°	330.9	15.9
40°-50°	353.8	17.0
50°-60°	341.5	16.4
60°-70°	294.0	14.1
70°-80°	198.9	9.6
80°-90°	52.5	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°	510.5	24.5
0°-40°	841.4	40.4
0°-60°	1536.7	73.8
0°-90°	2082.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2082.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	654	654	654	654	654	
5°	648	649	652	652	652	62
15°	623	625	630	633	634	176
25°	579	582	591	594	597	266
35°	513	518	528	539	544	321
45°	430	438	455	478	490	332
55°	332	343	380	418	438	298
65°	221	242	302	349	374	219
75°	109	144	204	245	259	117
85°	28	38	48	49	52	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	654.0	654.0	654.0	654.0	654.0
2.5°	649.4	650.9	654.0	654.0	655.5
5°	647.9	649.4	652.5	652.5	652.5
7.5°	643.3	644.8	647.9	649.4	649.4
10°	638.7	640.2	643.3	644.8	646.3
12.5°	631.0	632.6	637.1	640.2	640.2
15°	623.4	624.9	629.5	632.6	634.1
17.5°	614.2	617.2	621.8	624.9	626.4
20°	601.9	605.0	611.1	615.7	617.2
22.5°	591.2	594.3	600.4	605.0	608.0
25°	578.9	582.0	591.2	594.3	597.3
27.5°	563.6	566.7	574.3	580.5	585.1
30°	548.3	551.4	560.6	568.2	571.3
32.5°	531.5	536.1	546.8	552.9	557.5
35°	513.1	517.7	528.4	539.1	543.7
37.5°	494.7	499.3	510.0	523.8	529.9
40°	473.3	479.4	493.2	511.6	514.6
42.5°	453.4	461.0	473.3	494.7	502.4
45°	430.4	438.0	454.9	477.9	490.1
47.5°	408.9	416.6	435.0	462.5	477.9
50°	382.9	393.6	416.6	448.8	464.1
52.5°	358.4	367.6	398.2	433.4	451.8
55°	332.4	343.1	379.8	418.1	438.0
57.5°	309.4	318.6	359.9	402.8	425.8
60°	280.3	292.5	340.0	386.0	408.9
62.5°	249.7	268.0	320.1	367.6	392.1
65°	220.6	242.0	301.7	349.2	373.7
67.5°	194.5	217.5	278.8	329.3	352.3
70°	163.9	193.0	255.8	304.8	330.8
72.5°	136.3	168.5	229.7	278.8	301.7
75°	108.7	144.0	203.7	245.1	258.8
77.5°	84.2	117.9	174.6	186.9	188.4
80°	62.8	93.4	130.2	131.7	136.3
82.5°	42.9	65.9	84.2	91.9	93.4
85°	27.6	38.3	47.5	49.0	52.1
87.5°	12.3	13.8	16.8	15.3	15.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)