

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: P312705

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-RDP-CP187-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: P312705
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-CP187-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" 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: 2099.0 lumens
Efficiency: N/A
Efficacy: 65.0 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

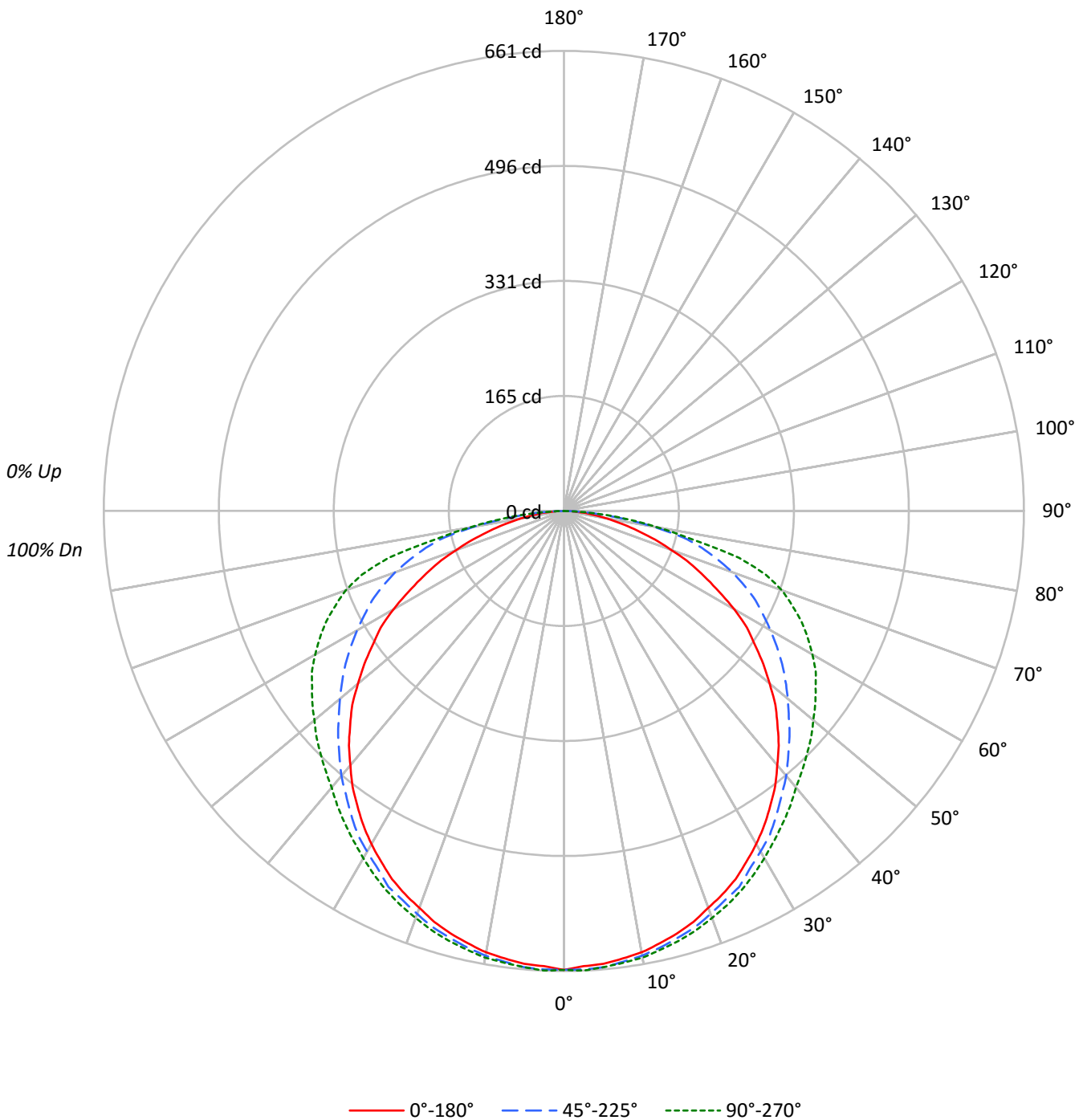
Input Watts (W): 32.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1774	1774	1774
5°	1764	1777	1777
10°	1759	1772	1780
15°	1751	1768	1781
20°	1738	1764	1782
25°	1733	1770	1788
30°	1718	1756	1790
35°	1699	1750	1801
40°	1676	1747	1822
45°	1651	1745	1880
50°	1616	1758	1959
55°	1572	1796	2072
60°	1521	1845	2219
65°	1416	1937	2399
70°	1300	2029	2624
75°	1140	2136	2714
80°	981	2033	2129
85°	858	1479	1621



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.4	3.0
10°-20°	179.1	8.5
20°-30°	273.2	13.0
30°-40°	333.6	15.9
40°-50°	356.7	17.0
50°-60°	344.3	16.4
60°-70°	296.4	14.1
70°-80°	200.5	9.6
80°-90°	52.9	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°	514.6	24.5
0°-40°	848.2	40.4
0°-60°	1549.2	73.8
0°-90°	2099.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2099.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	659	659	659	659	659	
5°	653	655	658	658	658	62
15°	628	630	635	638	639	177
25°	584	587	596	599	602	269
35°	517	522	533	544	548	324
45°	434	442	459	482	494	335
55°	335	346	383	422	442	300
65°	222	244	304	352	377	221
75°	110	145	205	247	261	118
85°	28	39	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°	659.3	659.3	659.3	659.3	659.3
2.5°	654.7	656.2	659.3	659.3	660.9
5°	653.2	654.7	657.8	657.8	657.8
7.5°	648.5	650.1	653.2	654.7	654.7
10°	643.9	645.4	648.5	650.1	651.6
12.5°	636.2	637.7	642.3	645.4	645.4
15°	628.5	630.0	634.6	637.7	639.3
17.5°	619.2	622.3	626.9	630.0	631.5
20°	606.8	609.9	616.1	620.7	622.3
22.5°	596.0	599.1	605.3	609.9	613.0
25°	583.7	586.8	596.0	599.1	602.2
27.5°	568.2	571.3	579.0	585.2	589.8
30°	552.8	555.9	565.1	572.9	576.0
32.5°	535.8	540.4	551.2	557.4	562.1
35°	517.3	521.9	532.7	543.5	548.2
37.5°	498.7	503.4	514.2	528.1	534.3
40°	477.1	483.3	497.2	515.7	518.8
42.5°	457.1	464.8	477.1	498.7	506.5
45°	433.9	441.6	458.6	481.8	494.1
47.5°	412.3	420.0	438.5	466.3	481.8
50°	386.0	396.8	420.0	452.4	467.9
52.5°	361.3	370.6	401.5	437.0	455.5
55°	335.1	345.9	382.9	421.5	441.6
57.5°	311.9	321.2	362.9	406.1	429.3
60°	282.6	294.9	342.8	389.1	412.3
62.5°	251.7	270.2	322.7	370.6	395.3
65°	222.4	244.0	304.2	352.1	376.8
67.5°	196.1	219.3	281.0	332.0	355.1
70°	165.2	194.6	257.9	307.3	333.5
72.5°	137.4	169.9	231.6	281.0	304.2
75°	109.6	145.1	205.4	247.1	261.0
77.5°	84.9	118.9	176.0	188.4	189.9
80°	63.3	94.2	131.2	132.8	137.4
82.5°	43.2	66.4	84.9	92.6	94.2
85°	27.8	38.6	47.9	49.4	52.5
87.5°	12.4	13.9	17.0	15.4	15.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)