

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: P312681

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-RDP-CP187-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: P312681
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: 22FCZ2-34HE-UNV-L83050-RDP-CP187-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" 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: 1938.0 lumens
Efficiency: N/A
Efficacy: 70.2 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

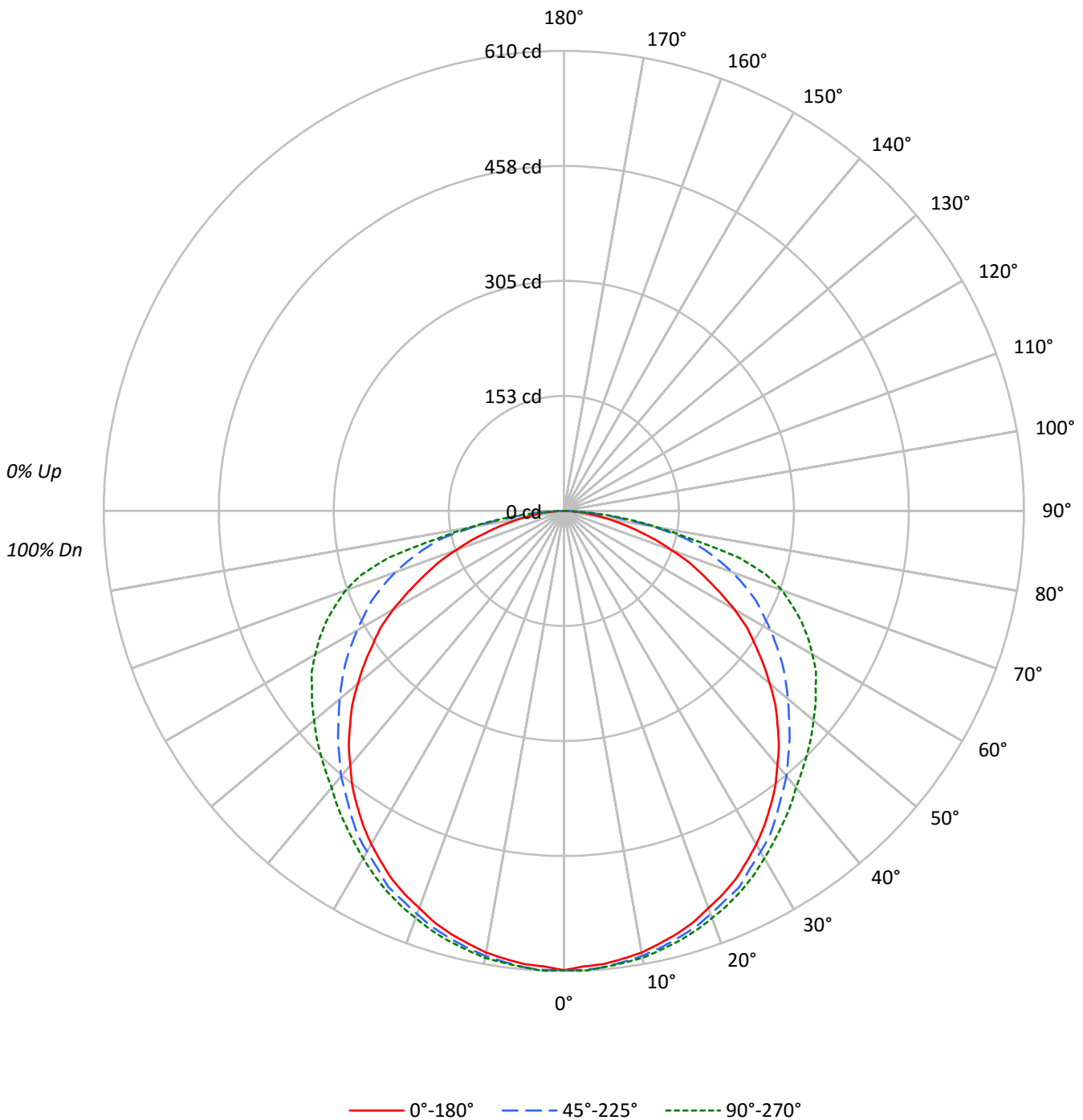
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1638	1638	1638
5°	1629	1640	1640
10°	1624	1636	1644
15°	1616	1632	1644
20°	1605	1629	1645
25°	1600	1634	1651
30°	1586	1621	1652
35°	1569	1616	1663
40°	1547	1613	1683
45°	1525	1611	1736
50°	1492	1623	1809
55°	1452	1659	1913
60°	1404	1703	2049
65°	1307	1789	2215
70°	1200	1873	2423
75°	1052	1971	2505
80°	907	1878	1967
85°	794	1365	1497



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.6	3.0
10°-20°	165.3	8.5
20°-30°	252.3	13.0
30°-40°	308.0	15.9
40°-50°	329.3	17.0
50°-60°	317.9	16.4
60°-70°	273.6	14.1
70°-80°	185.1	9.6
80°-90°	48.9	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°	475.2	24.5
0°-40°	783.2	40.4
0°-60°	1430.4	73.8
0°-90°	1938.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1938.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	609	609	609	609	609	
5°	603	604	607	607	607	57
15°	580	582	586	589	590	164
25°	539	542	550	553	556	248
35°	478	482	492	502	506	299
45°	401	408	423	445	456	309
55°	309	319	354	389	408	277
65°	205	225	281	325	348	204
75°	101	134	190	228	241	109
85°	26	36	44	46	48	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	608.8	608.8	608.8	608.8	608.8
2.5°	604.5	605.9	608.8	608.8	610.2
5°	603.1	604.5	607.3	607.3	607.3
7.5°	598.8	600.2	603.1	604.5	604.5
10°	594.5	595.9	598.8	600.2	601.6
12.5°	587.4	588.8	593.1	595.9	595.9
15°	580.2	581.7	585.9	588.8	590.2
17.5°	571.7	574.5	578.8	581.7	583.1
20°	560.3	563.1	568.8	573.1	574.5
22.5°	550.3	553.2	558.9	563.1	566.0
25°	538.9	541.8	550.3	553.2	556.0
27.5°	524.6	527.5	534.6	540.3	544.6
30°	510.4	513.2	521.8	528.9	531.8
32.5°	494.7	499.0	509.0	514.7	518.9
35°	477.6	481.9	491.9	501.8	506.1
37.5°	460.5	464.8	474.7	487.6	493.3
40°	440.5	446.2	459.1	476.2	479.0
42.5°	422.0	429.1	440.5	460.5	467.6
45°	400.6	407.7	423.4	444.8	456.2
47.5°	380.7	387.8	404.9	430.6	444.8
50°	356.4	366.4	387.8	417.7	432.0
52.5°	333.6	342.2	370.7	403.5	420.6
55°	309.4	319.3	353.6	389.2	407.7
57.5°	288.0	296.5	335.0	375.0	396.3
60°	260.9	272.3	316.5	359.3	380.7
62.5°	232.4	249.5	298.0	342.2	365.0
65°	205.3	225.3	280.9	325.1	347.9
67.5°	181.1	202.4	259.5	306.5	327.9
70°	152.5	179.6	238.1	283.7	307.9
72.5°	126.9	156.8	213.8	259.5	280.9
75°	101.2	134.0	189.6	228.1	240.9
77.5°	78.4	109.8	162.5	173.9	175.4
80°	58.5	87.0	121.2	122.6	126.9
82.5°	39.9	61.3	78.4	85.5	87.0
85°	25.7	35.6	44.2	45.6	48.5
87.5°	11.4	12.8	15.7	14.3	14.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)