

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: P312686

Luminaire Tested: **22FCZ2-34HE-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: P312686
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-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: 1922.0 lumens
Efficiency: N/A
Efficacy: 69.6 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

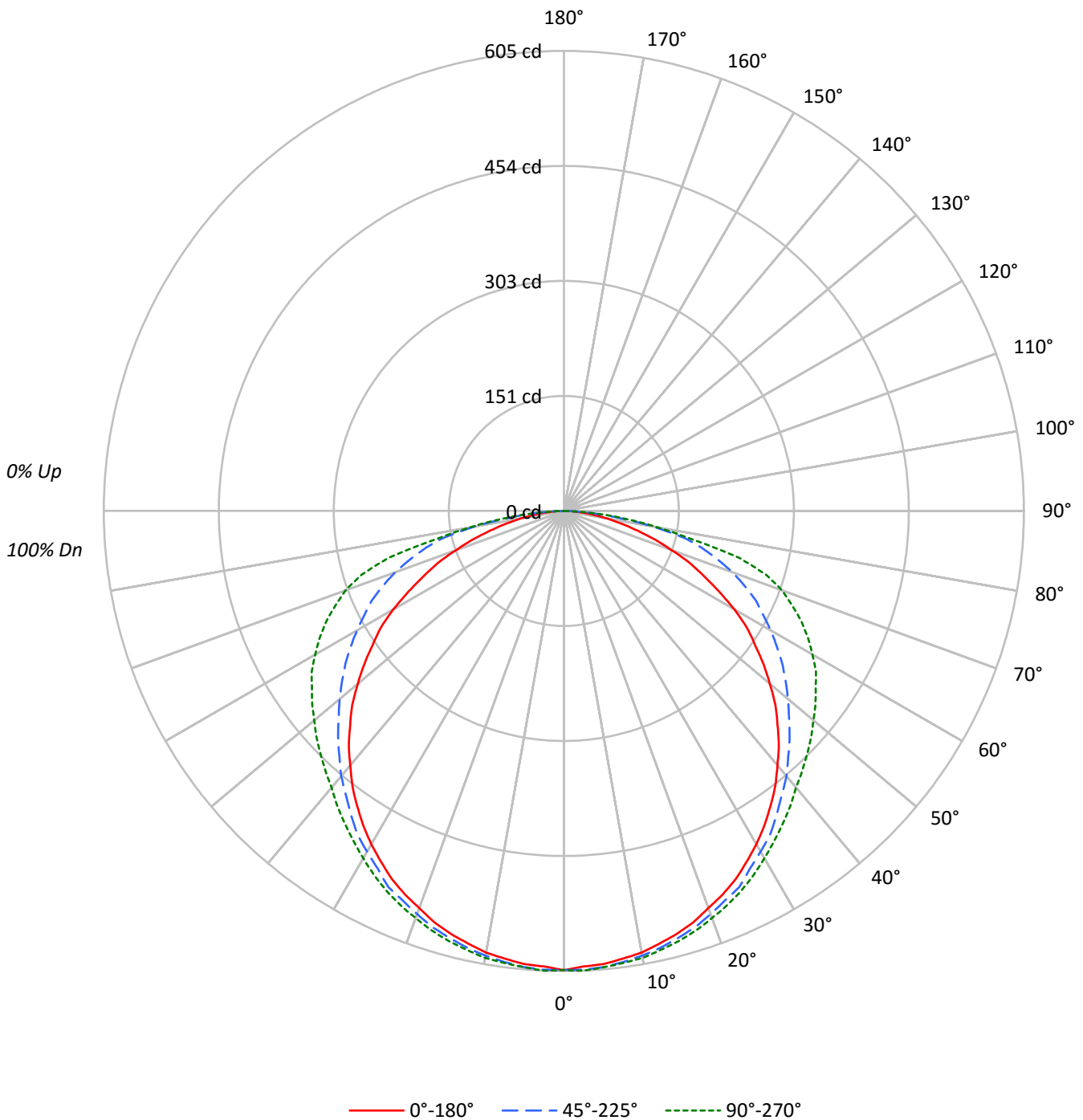
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1625	1625	1625
5°	1616	1627	1627
10°	1611	1623	1630
15°	1603	1619	1631
20°	1591	1615	1632
25°	1587	1621	1637
30°	1573	1608	1639
35°	1556	1602	1649
40°	1535	1599	1669
45°	1512	1598	1722
50°	1480	1610	1793
55°	1439	1645	1897
60°	1392	1689	2032
65°	1296	1773	2197
70°	1190	1858	2403
75°	1044	1955	2484
80°	899	1863	1949
85°	787	1352	1485



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.1	3.0
10°-20°	164.0	8.5
20°-30°	250.2	13.0
30°-40°	305.5	15.9
40°-50°	326.6	17.0
50°-60°	315.3	16.4
60°-70°	271.4	14.1
70°-80°	183.6	9.6
80°-90°	48.4	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°	471.3	24.5
0°-40°	776.7	40.4
0°-60°	1418.6	73.8
0°-90°	1922.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1922.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	604	604	604	604	604	
5°	598	600	602	602	602	57
15°	576	577	581	584	585	162
25°	534	537	546	549	551	246
35°	474	478	488	498	502	296
45°	397	404	420	441	452	307
55°	307	317	351	386	404	275
65°	204	223	278	322	345	202
75°	100	133	188	226	239	108
85°	26	35	44	45	48	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	603.7	603.7	603.7	603.7	603.7
2.5°	599.5	600.9	603.7	603.7	605.1
5°	598.1	599.5	602.3	602.3	602.3
7.5°	593.8	595.3	598.1	599.5	599.5
10°	589.6	591.0	593.8	595.3	596.7
12.5°	582.5	583.9	588.2	591.0	591.0
15°	575.5	576.9	581.1	583.9	585.4
17.5°	567.0	569.8	574.0	576.9	578.3
20°	555.7	558.5	564.1	568.4	569.8
22.5°	545.8	548.6	554.2	558.5	561.3
25°	534.5	537.3	545.8	548.6	551.4
27.5°	520.3	523.1	530.2	535.9	540.1
30°	506.2	509.0	517.5	524.6	527.4
32.5°	490.6	494.9	504.8	510.4	514.7
35°	473.7	477.9	487.8	497.7	501.9
37.5°	456.7	460.9	470.8	483.6	489.2
40°	436.9	442.5	455.3	472.2	475.1
42.5°	418.5	425.6	436.9	456.7	463.8
45°	397.3	404.4	419.9	441.1	452.4
47.5°	377.5	384.6	401.5	427.0	441.1
50°	353.5	363.4	384.6	414.3	428.4
52.5°	330.9	339.3	367.6	400.1	417.1
55°	306.8	316.7	350.6	386.0	404.4
57.5°	285.6	294.1	332.3	371.9	393.1
60°	258.7	270.1	313.9	356.3	377.5
62.5°	230.5	247.4	295.5	339.3	362.0
65°	203.6	223.4	278.5	322.4	345.0
67.5°	179.6	200.8	257.3	304.0	325.2
70°	151.3	178.2	236.1	281.4	305.4
72.5°	125.8	155.5	212.1	257.3	278.5
75°	100.4	132.9	188.0	226.2	238.9
77.5°	77.8	108.9	161.2	172.5	173.9
80°	58.0	86.2	120.2	121.6	125.8
82.5°	39.6	60.8	77.8	84.8	86.2
85°	25.5	35.3	43.8	45.2	48.1
87.5°	11.3	12.7	15.6	14.1	14.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)