

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: P312164

Luminaire Tested: **14FCZ2-20-UNV-L83050-CP250-W2A-U-5000K**

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: P312164
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-49)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-20-UNV-L83050-CP250-W2A-U-5000K
Description: 1'X4' TROFFER LED MODULE,RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 5000K 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: 1976.0 lumens
Efficiency: N/A
Efficacy: 114.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

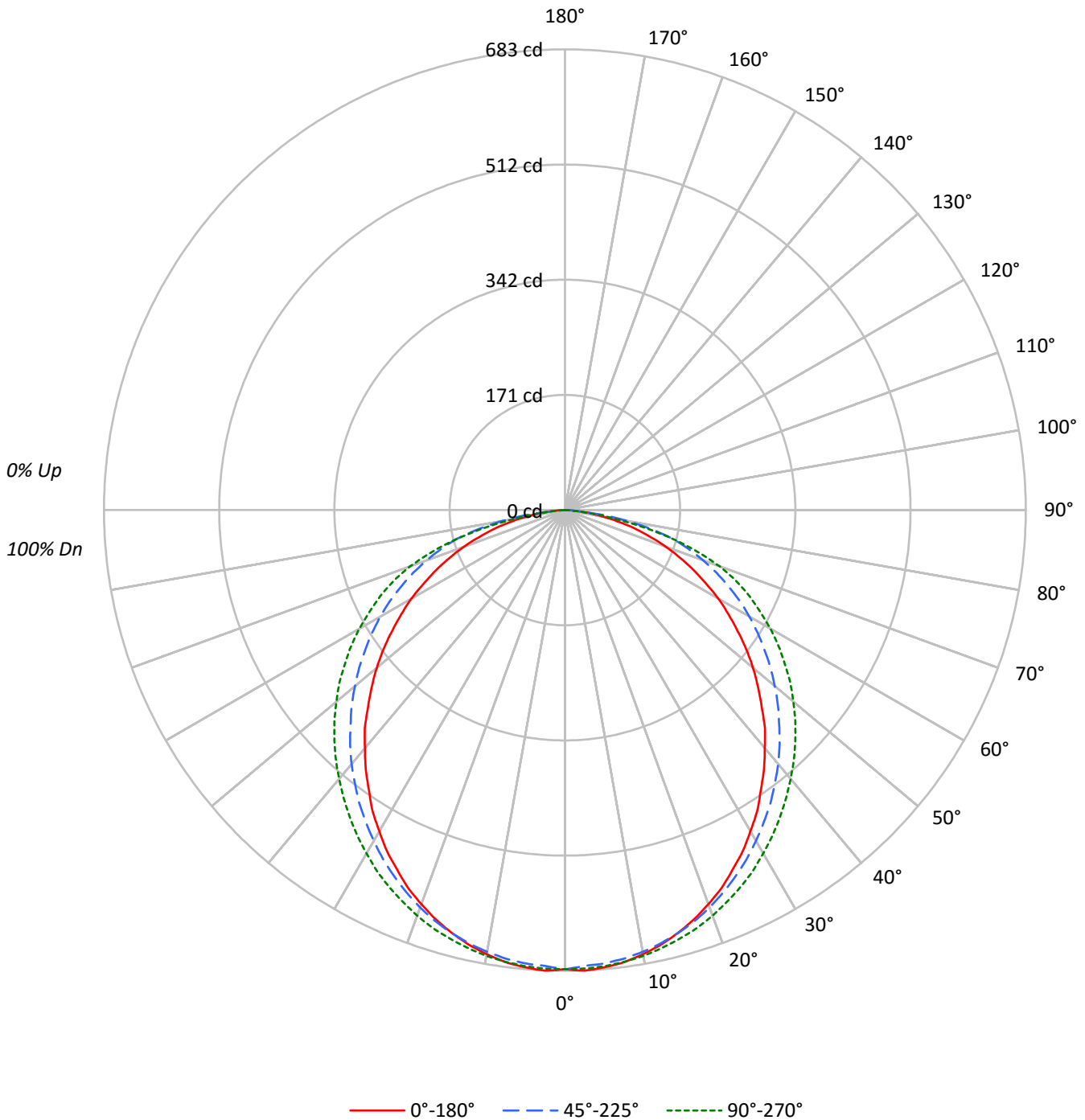
Input Watts (W): 17.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	99	95	106	101	97	94	97	94	91	93	90	88	90	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	79	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1832	1832	1832
5°	1838	1822	1833
10°	1826	1817	1834
15°	1807	1808	1833
20°	1780	1796	1832
25°	1746	1778	1830
30°	1709	1759	1826
35°	1663	1744	1825
40°	1619	1727	1828
45°	1569	1709	1838
50°	1523	1701	1850
55°	1466	1695	1867
60°	1413	1698	1892
65°	1341	1703	1922
70°	1258	1716	1921
75°	1141	1731	1736
80°	936	1495	1235
85°	695	707	287



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.4	3.3
10°-20°	184.0	9.3
20°-30°	277.2	14.0
30°-40°	332.6	16.8
40°-50°	346.7	17.5
50°-60°	321.0	16.2
60°-70°	259.3	13.1
70°-80°	158.1	8.0
80°-90°	32.7	1.7
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°	525.6	26.6
0°-40°	858.3	43.4
0°-60°	1525.9	77.2
0°-90°	1976.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1976.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	681	681	681	681	681	
5°	680	678	675	679	678	65
15°	649	649	649	658	658	183
25°	588	592	599	614	616	271
35°	506	514	531	550	556	317
45°	412	425	449	474	483	319
55°	312	329	361	390	398	280
65°	211	231	267	294	302	208
75°	110	134	166	169	167	115
85°	22	34	23	13	9	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	680.7	680.7	680.7	680.7	680.7
2.5°	683.4	681.2	676.3	681.2	680.3
5°	680.3	678.5	674.6	679.4	678.5
7.5°	675.9	674.1	670.6	676.3	675.5
10°	668.4	667.5	664.9	671.5	671.0
12.5°	659.6	659.1	657.8	665.3	664.9
15°	648.6	649.0	649.0	657.8	657.8
17.5°	636.2	637.1	638.9	648.6	649.9
20°	621.7	623.5	627.0	638.0	639.8
22.5°	606.7	608.0	613.3	626.5	628.3
25°	588.2	591.7	598.8	613.8	616.4
27.5°	570.6	573.7	583.4	598.8	603.2
30°	549.9	554.7	566.2	582.9	587.8
32.5°	530.1	535.3	548.6	567.9	572.3
35°	506.3	514.2	530.9	550.3	555.6
37.5°	484.7	492.2	511.1	532.3	538.4
40°	460.9	470.1	491.7	514.2	520.4
42.5°	438.8	447.7	471.0	493.9	502.3
45°	412.4	424.7	449.0	474.1	482.9
47.5°	388.2	400.5	428.3	455.1	463.1
50°	363.9	377.2	406.2	434.0	441.9
52.5°	338.8	352.9	384.2	412.0	421.2
55°	312.4	328.7	361.3	389.5	397.9
57.5°	287.3	304.0	338.8	367.5	375.8
60°	262.6	279.8	315.5	342.8	351.6
62.5°	235.3	255.6	292.6	319.4	326.0
65°	210.6	231.3	267.4	294.3	301.8
67.5°	184.6	207.1	243.2	267.9	274.9
70°	159.9	183.3	218.1	241.0	244.1
72.5°	133.5	157.3	192.5	207.1	207.1
75°	109.7	133.9	166.5	169.2	167.0
77.5°	83.7	110.6	131.7	126.5	121.2
80°	60.4	86.8	96.5	86.8	79.7
82.5°	40.5	63.0	58.2	46.3	41.0
85°	22.5	33.5	22.9	12.8	9.3
87.5°	8.4	7.5	2.2	2.2	2.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)