

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: P312291

Luminaire Tested: **14FCZ2-20-UNV-L83050-S-CA08-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: P312291
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)
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-S-CA08-W2A-U-3500K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.08" ACRYLIC 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: 2030.0 lumens
Efficiency: N/A
Efficacy: 123.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.26 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

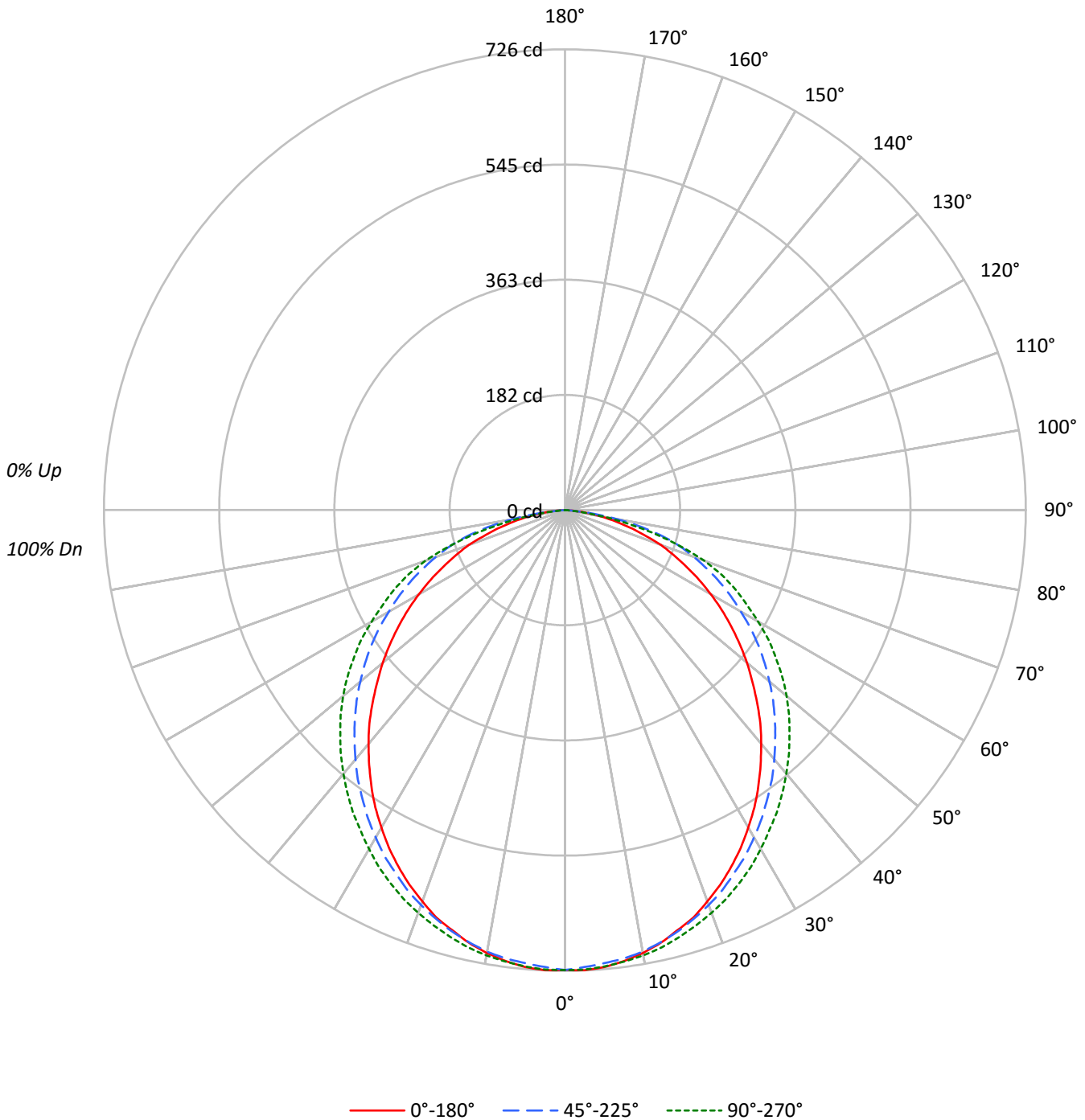
Input Watts (W): 16.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1950	1950	1950
5°	1952	1936	1949
10°	1936	1931	1947
15°	1909	1915	1940
20°	1879	1897	1934
25°	1841	1874	1928
30°	1795	1851	1917
35°	1746	1825	1911
40°	1690	1803	1906
45°	1628	1781	1904
50°	1567	1761	1909
55°	1502	1747	1903
60°	1430	1723	1891
65°	1346	1717	1890
70°	1267	1703	1837
75°	1099	1664	1570
80°	890	1342	1044
85°	590	466	312



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.4	3.4
10°-20°	194.7	9.6
20°-30°	292.1	14.4
30°-40°	348.4	17.2
40°-50°	360.2	17.7
50°-60°	328.9	16.2
60°-70°	258.8	12.7
70°-80°	150.6	7.4
80°-90°	27.8	1.4
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°	555.3	27.4
0°-40°	903.7	44.5
0°-60°	1592.8	78.5
0°-90°	2030.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2030.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	725	725	725	725	725	
5°	723	721	717	723	722	69
15°	685	686	687	696	696	193
25°	620	623	631	646	649	285
35°	531	538	556	577	582	332
45°	428	442	468	494	500	330
55°	320	337	372	400	406	286
65°	211	234	270	291	297	210
75°	106	131	160	157	151	112
85°	19	27	15	12	10	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	724.7	724.7	724.7	724.7	724.7
2.5°	725.7	723.7	720.7	725.7	724.7
5°	722.7	720.7	716.6	722.7	721.7
7.5°	716.6	714.6	712.6	718.6	717.6
10°	708.6	707.6	706.6	713.6	712.6
12.5°	698.5	698.5	697.5	705.6	705.6
15°	685.4	686.4	687.4	696.5	696.5
17.5°	673.3	672.3	675.4	685.4	686.4
20°	656.2	658.2	662.3	674.4	675.4
22.5°	639.1	641.1	648.2	660.3	663.3
25°	620.0	623.0	631.1	646.2	649.2
27.5°	599.9	603.9	615.0	631.1	634.1
30°	577.7	583.8	595.8	614.0	617.0
32.5°	555.6	561.6	576.7	594.8	598.9
35°	531.4	538.5	555.6	576.7	581.8
37.5°	506.3	515.3	535.5	556.6	562.6
40°	481.1	491.2	513.3	535.5	542.5
42.5°	455.9	466.0	490.2	515.3	522.4
45°	427.8	441.9	468.0	494.2	500.2
47.5°	400.6	415.7	444.9	471.0	479.1
50°	374.4	389.5	420.7	447.9	455.9
52.5°	347.2	363.3	396.6	424.7	431.8
55°	320.1	337.2	372.4	399.6	405.6
57.5°	292.9	311.0	347.2	373.4	380.5
60°	265.7	284.8	320.1	346.2	351.3
62.5°	238.5	258.7	294.9	318.1	323.1
65°	211.4	233.5	269.7	290.9	296.9
67.5°	185.2	207.3	242.6	262.7	267.7
70°	161.0	181.2	216.4	231.5	233.5
72.5°	130.8	156.0	190.2	198.3	193.2
75°	105.7	130.8	160.0	157.0	151.0
77.5°	80.5	105.7	124.8	114.7	106.7
80°	57.4	82.5	86.6	71.5	67.4
82.5°	37.2	57.4	48.3	37.2	30.2
85°	19.1	27.2	15.1	12.1	10.1
87.5°	6.0	4.0	2.0	2.0	1.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)