

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: P312312

Luminaire Tested: **14FCZ2-20-UNV-L83050-S-CP250-W2A-U-4000K**

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: P312312
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-CP250-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (168) 4000K 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: 1978.0 lumens
Efficiency: N/A
Efficacy: 117.0 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

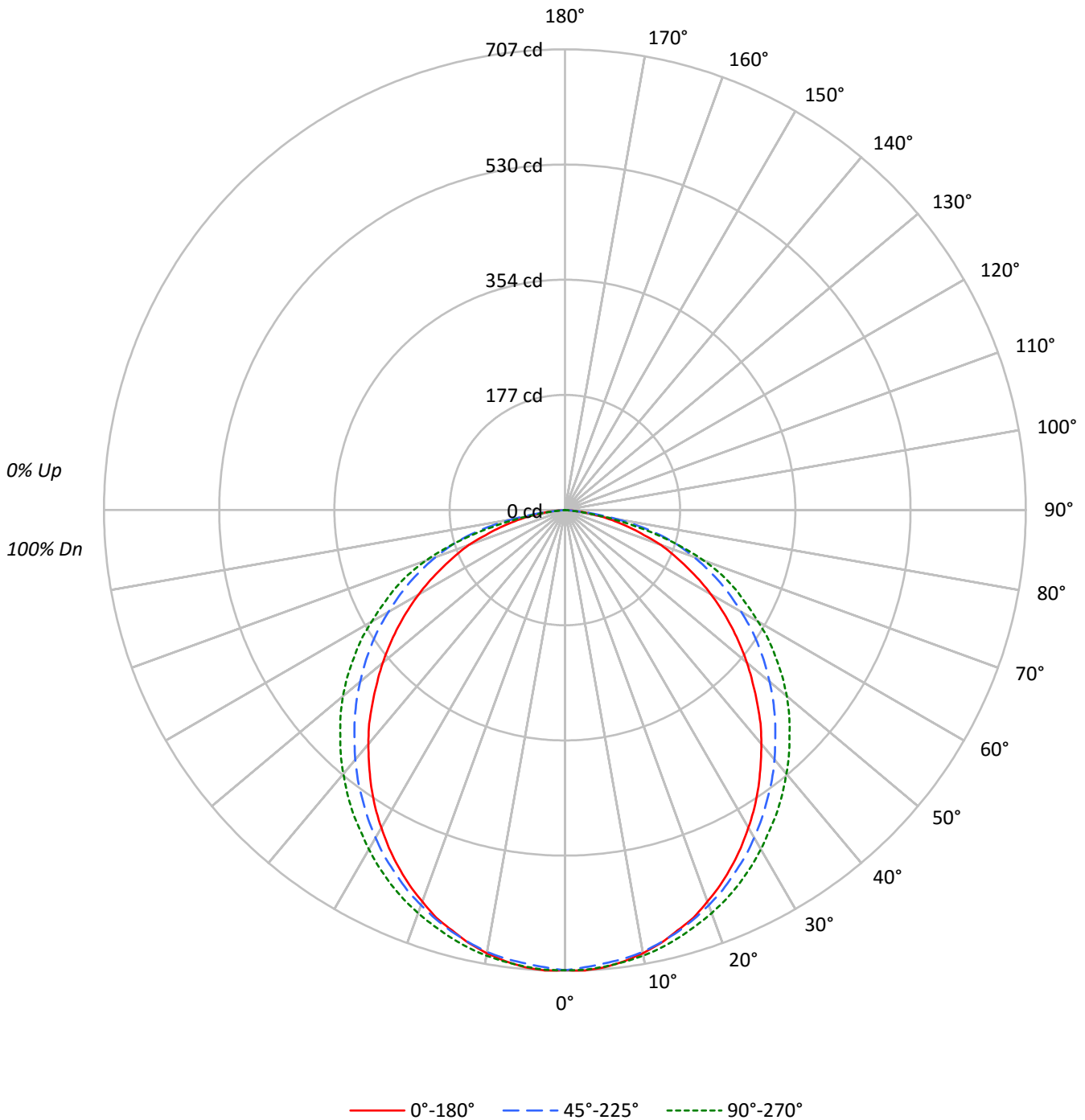
Input Watts (W): 16.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1900	1900	1900
5°	1902	1886	1900
10°	1887	1881	1897
15°	1861	1866	1891
20°	1831	1848	1885
25°	1794	1826	1878
30°	1749	1804	1868
35°	1701	1779	1862
40°	1647	1757	1857
45°	1586	1735	1855
50°	1527	1716	1860
55°	1463	1703	1854
60°	1393	1679	1842
65°	1311	1673	1842
70°	1234	1659	1790
75°	1071	1621	1529
80°	866	1306	1018
85°	574	454	303



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	3.4
10°-20°	189.7	9.6
20°-30°	284.6	14.4
30°-40°	339.5	17.2
40°-50°	351.0	17.7
50°-60°	320.4	16.2
60°-70°	252.2	12.7
70°-80°	146.8	7.4
80°-90°	27.1	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°	541.0	27.4
0°-40°	880.5	44.5
0°-60°	1551.9	78.5
0°-90°	1978.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1978.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	706	706	706	706	706	
5°	704	702	698	704	703	67
15°	668	669	670	679	679	188
25°	604	607	615	630	633	278
35°	518	525	541	562	567	324
45°	417	430	456	482	487	322
55°	312	328	363	389	395	279
65°	206	228	263	283	289	204
75°	103	128	156	153	147	109
85°	19	26	15	12	10	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	706.1	706.1	706.1	706.1	706.1
2.5°	707.1	705.1	702.2	707.1	706.1
5°	704.2	702.2	698.3	704.2	703.2
7.5°	698.3	696.3	694.3	700.2	699.2
10°	690.4	689.4	688.5	695.3	694.3
12.5°	680.6	680.6	679.6	687.5	687.5
15°	667.9	668.8	669.8	678.7	678.7
17.5°	656.1	655.1	658.1	667.9	668.8
20°	639.4	641.4	645.3	657.1	658.1
22.5°	622.8	624.7	631.6	643.3	646.3
25°	604.1	607.1	614.9	629.6	632.6
27.5°	584.5	588.4	599.2	614.9	617.8
30°	562.9	568.8	580.6	598.2	601.2
32.5°	541.4	547.2	561.9	579.6	583.5
35°	517.8	524.7	541.4	561.9	566.9
37.5°	493.3	502.1	521.7	542.3	548.2
40°	468.8	478.6	500.2	521.7	528.6
42.5°	444.3	454.1	477.6	502.1	509.0
45°	416.8	430.5	456.0	481.5	487.4
47.5°	390.3	405.0	433.5	459.0	466.8
50°	364.8	379.5	409.9	436.4	444.3
52.5°	338.3	354.0	386.4	413.9	420.7
55°	311.9	328.5	362.9	389.3	395.2
57.5°	285.4	303.0	338.3	363.8	370.7
60°	258.9	277.5	311.9	337.4	342.3
62.5°	232.4	252.0	287.3	309.9	314.8
65°	205.9	227.5	262.8	283.4	289.3
67.5°	180.5	202.0	236.4	256.0	260.9
70°	156.9	176.5	210.9	225.6	227.5
72.5°	127.5	152.0	185.4	193.2	188.3
75°	103.0	127.5	155.9	153.0	147.1
77.5°	78.5	103.0	121.6	111.8	104.0
80°	55.9	80.4	84.3	69.6	65.7
82.5°	36.3	55.9	47.1	36.3	29.4
85°	18.6	26.5	14.7	11.8	9.8
87.5°	5.9	3.9	2.0	2.0	1.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)