

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: P312313

Luminaire Tested: **14FCZ2-20-UNV-L83050-S-CP250-W2A-U-4500K**

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: P312313
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-4500K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (168) 4500K 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: 1997.0 lumens
Efficiency: N/A
Efficacy: 115.4 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

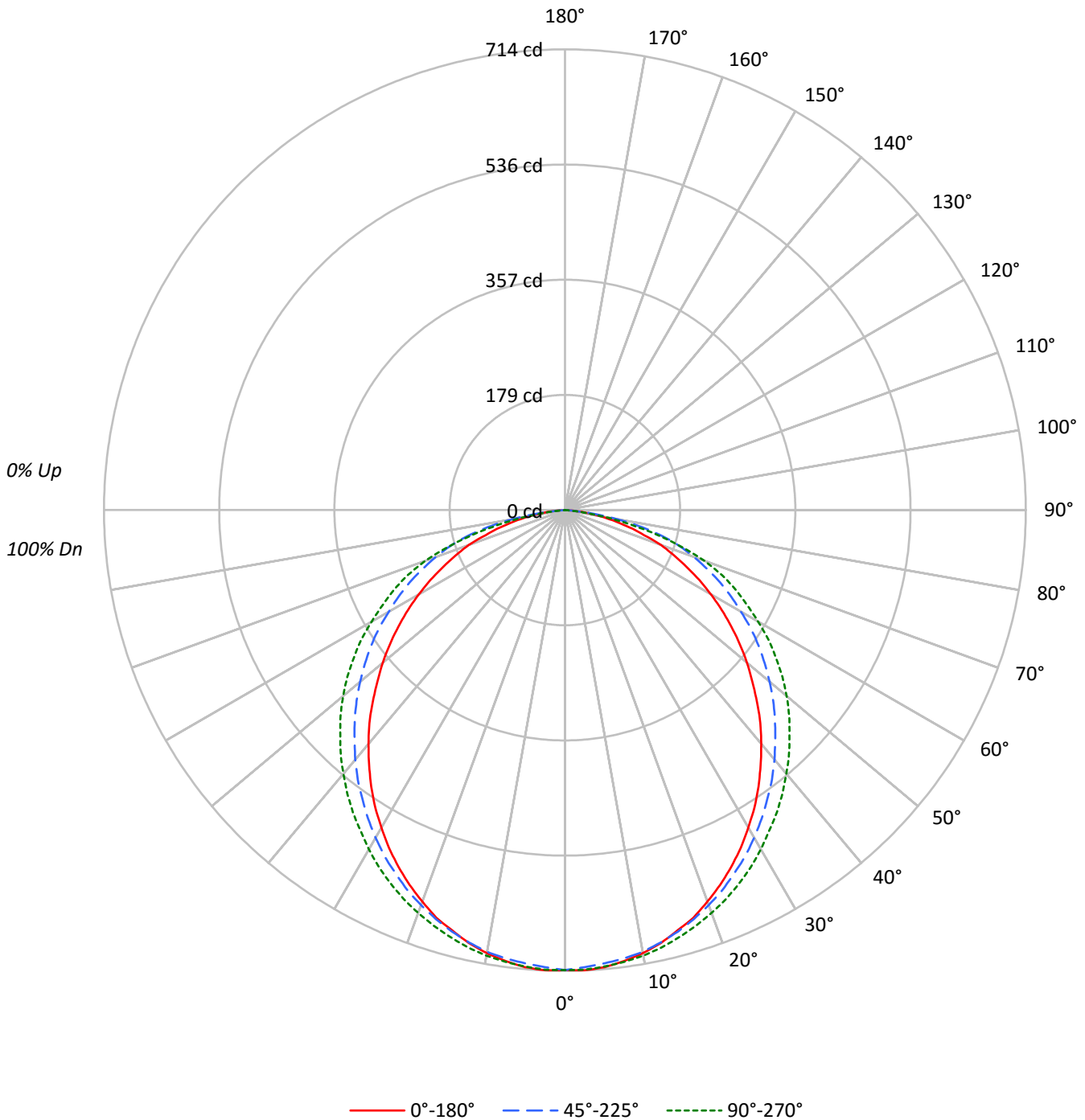
Input Watts (W): 17.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1918	1918	1918
5°	1920	1904	1918
10°	1905	1899	1915
15°	1879	1884	1909
20°	1849	1866	1903
25°	1811	1843	1896
30°	1766	1821	1886
35°	1717	1796	1880
40°	1663	1774	1875
45°	1601	1752	1873
50°	1542	1733	1878
55°	1477	1719	1872
60°	1407	1695	1860
65°	1324	1690	1860
70°	1246	1675	1807
75°	1081	1637	1544
80°	874	1320	1027
85°	580	460	306



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.3	3.4
10°-20°	191.6	9.6
20°-30°	287.3	14.4
30°-40°	342.8	17.2
40°-50°	354.4	17.7
50°-60°	323.5	16.2
60°-70°	254.6	12.7
70°-80°	148.2	7.4
80°-90°	27.3	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°	546.2	27.4
0°-40°	889.0	44.5
0°-60°	1566.9	78.5
0°-90°	1997.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1997.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	713	713	713	713	713	
5°	711	709	705	711	710	67
15°	674	675	676	685	685	190
25°	610	613	621	636	639	281
35°	523	530	547	567	572	327
45°	421	435	460	486	492	325
55°	315	332	366	393	399	282
65°	208	230	265	286	292	206
75°	104	129	157	154	148	111
85°	19	27	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°	712.9	712.9	712.9	712.9	712.9
2.5°	713.9	711.9	708.9	713.9	712.9
5°	710.9	708.9	705.0	710.9	709.9
7.5°	705.0	703.0	701.0	707.0	706.0
10°	697.1	696.1	695.1	702.0	701.0
12.5°	687.2	687.2	686.2	694.1	694.1
15°	674.3	675.3	676.3	685.2	685.2
17.5°	662.4	661.4	664.4	674.3	675.3
20°	645.6	647.5	651.5	663.4	664.4
22.5°	628.7	630.7	637.6	649.5	652.5
25°	609.9	612.9	620.8	635.7	638.6
27.5°	590.1	594.1	605.0	620.8	623.8
30°	568.3	574.3	586.2	604.0	607.0
32.5°	546.6	552.5	567.3	585.2	589.1
35°	522.8	529.7	546.6	567.3	572.3
37.5°	498.0	506.9	526.8	547.5	553.5
40°	473.3	483.2	505.0	526.8	533.7
42.5°	448.5	458.4	482.2	506.9	513.9
45°	420.8	434.7	460.4	486.2	492.1
47.5°	394.1	408.9	437.6	463.4	471.3
50°	368.3	383.2	413.9	440.6	448.5
52.5°	341.6	357.4	390.1	417.8	424.8
55°	314.9	331.7	366.3	393.1	399.0
57.5°	288.1	306.0	341.6	367.3	374.3
60°	261.4	280.2	314.9	340.6	345.6
62.5°	234.7	254.5	290.1	312.9	317.8
65°	207.9	229.7	265.4	286.1	292.1
67.5°	182.2	204.0	238.6	258.4	263.4
70°	158.4	178.2	212.9	227.7	229.7
72.5°	128.7	153.5	187.1	195.1	190.1
75°	104.0	128.7	157.4	154.5	148.5
77.5°	79.2	104.0	122.8	112.9	105.0
80°	56.4	81.2	85.2	70.3	66.3
82.5°	36.6	56.4	47.5	36.6	29.7
85°	18.8	26.7	14.9	11.9	9.9
87.5°	5.9	4.0	2.0	2.0	1.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)