

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: P312307

Luminaire Tested: **14FCZ2-20-UNV-L83050-S-CP187-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: P312307
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-CP187-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.187" 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: 1994.0 lumens
Efficiency: N/A
Efficacy: 118.0 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

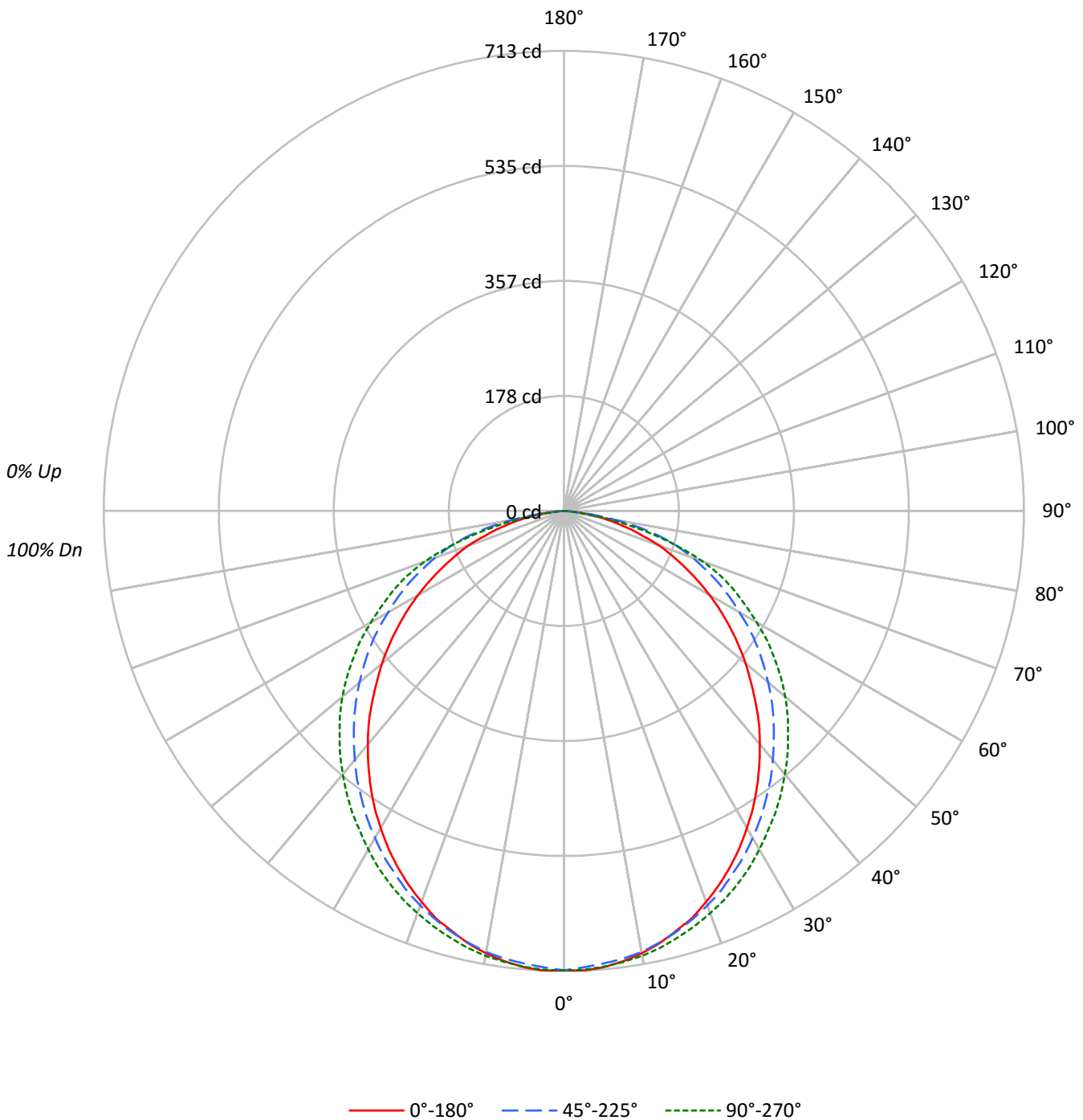
Input Watts (W): 16.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1915	1915	1915
5°	1917	1901	1915
10°	1902	1896	1913
15°	1876	1881	1906
20°	1846	1863	1900
25°	1808	1841	1893
30°	1763	1819	1883
35°	1715	1793	1877
40°	1660	1771	1872
45°	1599	1749	1870
50°	1540	1730	1875
55°	1475	1716	1869
60°	1405	1692	1857
65°	1322	1687	1857
70°	1245	1673	1805
75°	1079	1634	1542
80°	874	1317	1026
85°	580	457	306



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.2	3.4
10°-20°	191.3	9.6
20°-30°	286.9	14.4
30°-40°	342.3	17.2
40°-50°	353.8	17.7
50°-60°	323.0	16.2
60°-70°	254.2	12.7
70°-80°	148.0	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°	545.4	27.4
0°-40°	887.7	44.5
0°-60°	1564.5	78.5
0°-90°	1994.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1994.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	712	712	712	712	712	
5°	710	708	704	710	709	67
15°	673	674	675	684	684	190
25°	609	612	620	635	638	280
35°	522	529	546	566	571	326
45°	420	434	460	485	491	324
55°	314	331	366	392	398	281
65°	208	229	265	286	292	206
75°	104	128	157	154	148	110
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°	711.8	711.8	711.8	711.8	711.8
2.5°	712.8	710.8	707.9	712.8	711.8
5°	709.8	707.9	703.9	709.8	708.9
7.5°	703.9	701.9	700.0	705.9	704.9
10°	696.0	695.0	694.0	700.9	700.0
12.5°	686.1	686.1	685.1	693.0	693.0
15°	673.3	674.3	675.2	684.1	684.1
17.5°	661.4	660.4	663.4	673.3	674.3
20°	644.6	646.6	650.5	662.4	663.4
22.5°	627.8	629.8	636.7	648.6	651.5
25°	609.0	612.0	619.9	634.7	637.7
27.5°	589.2	593.2	604.1	619.9	622.8
30°	567.5	573.4	585.3	603.1	606.0
32.5°	545.7	551.7	566.5	584.3	588.2
35°	522.0	528.9	545.7	566.5	571.4
37.5°	497.3	506.2	526.0	546.7	552.7
40°	472.6	482.5	504.2	526.0	532.9
42.5°	447.9	457.7	481.5	506.2	513.1
45°	420.2	434.0	459.7	485.4	491.4
47.5°	393.5	408.3	437.0	462.7	470.6
50°	367.8	382.6	413.3	439.9	447.9
52.5°	341.1	356.9	389.5	417.2	424.1
55°	314.4	331.2	365.8	392.5	398.4
57.5°	287.7	305.5	341.1	366.8	373.7
60°	261.0	279.8	314.4	340.1	345.0
62.5°	234.3	254.1	289.7	312.4	317.4
65°	207.6	229.4	265.0	285.7	291.7
67.5°	181.9	203.7	238.3	258.0	263.0
70°	158.2	178.0	212.6	227.4	229.4
72.5°	128.5	153.2	186.9	194.8	189.8
75°	103.8	128.5	157.2	154.2	148.3
77.5°	79.1	103.8	122.6	112.7	104.8
80°	56.4	81.1	85.0	70.2	66.2
82.5°	36.6	56.4	47.5	36.6	29.7
85°	18.8	26.7	14.8	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)