

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: P312142

Luminaire Tested: **14FCZ2-20-UNV-L83050-CA08-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: P312142
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-CA08-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE,RIBBED LENS, 0.08" ACRYLIC 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: 2109.0 lumens
Efficiency: N/A
Efficacy: 124.8 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

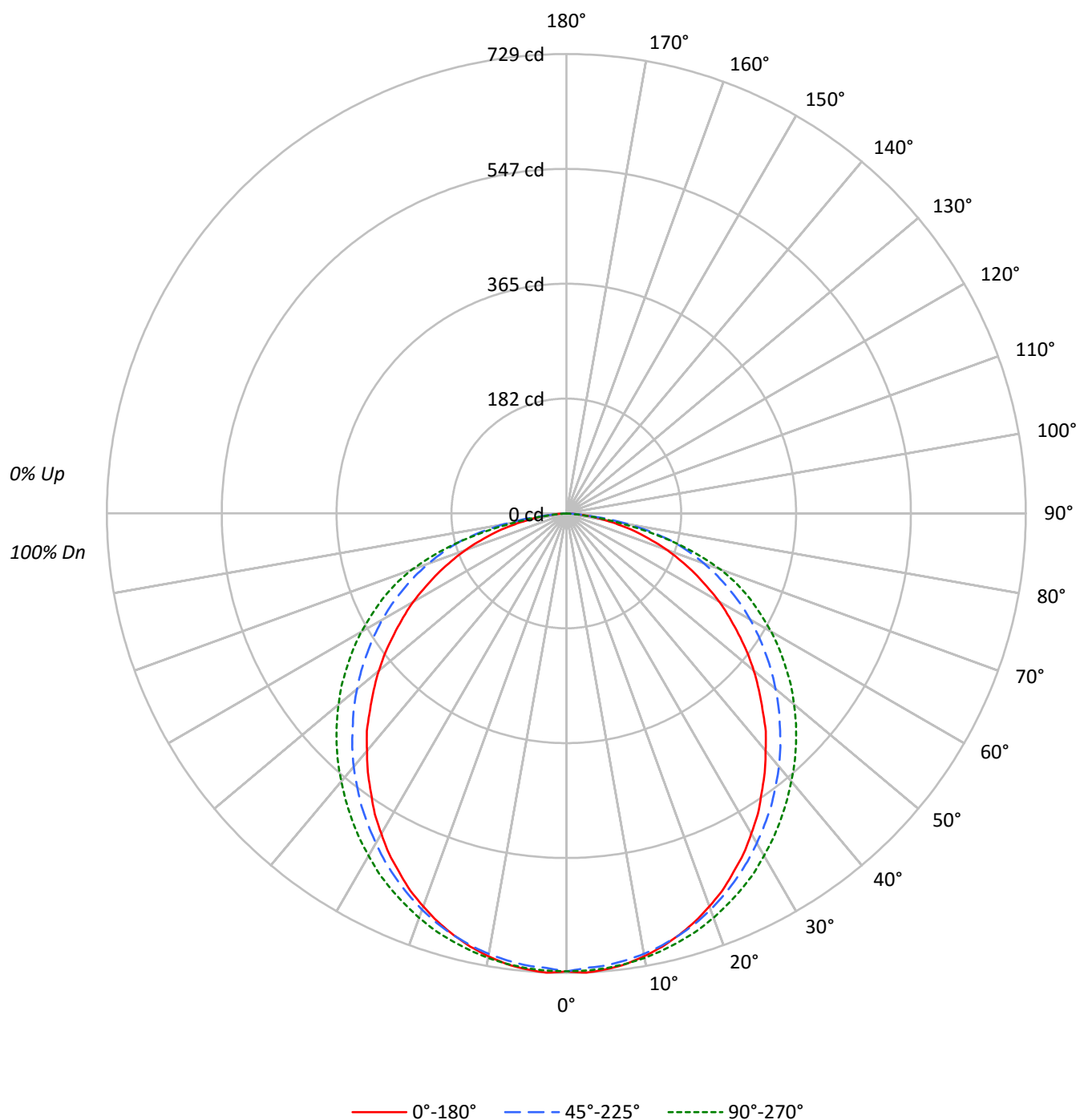
Input Watts (W): 16.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	109	104	99	95	106	101	97	94	97	94	91		93	90	88		83
2	98	90	83	77	96	88	82	76	84	79	74		81	77	73		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	79	68	60	53	66	58	53		63	57	52		49
5	75	62	53	46	73	61	52	46	59	51	45		57	50	45		42
6	69	56	47	40	67	55	46	40	53	45	40		51	44	39		37
7	64	51	42	35	63	50	41	35	48	41	35		47	40	35		32
8	60	46	37	32	58	45	37	31	44	37	31		43	36	31		29
9	56	42	34	28	54	42	34	28	41	33	28		39	33	28		26
10	52	39	31	26	51	39	31	26	37	30	26		37	30	25		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1955	1955	1955
5°	1961	1945	1956
10°	1949	1939	1957
15°	1928	1930	1956
20°	1900	1916	1955
25°	1864	1898	1953
30°	1824	1878	1949
35°	1775	1862	1948
40°	1728	1844	1951
45°	1675	1824	1961
50°	1626	1815	1975
55°	1564	1809	1992
60°	1509	1812	2020
65°	1431	1818	2051
70°	1343	1832	2050
75°	1218	1849	1853
80°	998	1596	1319
85°	741	756	306



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.8	3.3
10°-20°	196.4	9.3
20°-30°	295.9	14.0
30°-40°	355.0	16.8
40°-50°	370.0	17.5
50°-60°	342.6	16.2
60°-70°	276.8	13.1
70°-80°	168.8	8.0
80°-90°	34.8	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°	561.0	26.6
0°-40°	916.0	43.4
0°-60°	1628.6	77.2
0°-90°	2109.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2109.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	727	727	727	727	727	
5°	726	724	720	725	724	69
15°	692	693	693	702	702	195
25°	628	632	639	655	658	289
35°	540	549	567	587	593	338
45°	440	453	479	506	515	340
55°	333	351	386	416	425	299
65°	225	247	286	314	322	222
75°	117	143	178	181	178	123
85°	24	36	24	14	10	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	726.6	726.6	726.6	726.6	726.6
2.5°	729.4	727.0	721.9	727.0	726.1
5°	726.1	724.2	720.0	725.1	724.2
7.5°	721.4	719.5	715.7	721.9	720.9
10°	713.4	712.4	709.6	716.7	716.2
12.5°	704.0	703.5	702.1	710.1	709.6
15°	692.2	692.7	692.7	702.1	702.1
17.5°	679.1	680.0	681.9	692.2	693.6
20°	663.5	665.4	669.2	680.9	682.8
22.5°	647.6	649.0	654.6	668.7	670.6
25°	627.8	631.6	639.1	655.1	657.9
27.5°	609.0	612.3	622.6	639.1	643.8
30°	586.9	592.1	604.3	622.2	627.3
32.5°	565.7	571.4	585.5	606.2	610.9
35°	540.3	548.8	566.7	587.4	593.0
37.5°	517.3	525.3	545.5	568.1	574.7
40°	491.9	501.8	524.8	548.8	555.4
42.5°	468.4	477.8	502.7	527.2	536.1
45°	440.2	453.3	479.2	506.0	515.4
47.5°	414.3	427.5	457.1	485.8	494.2
50°	388.4	402.5	433.6	463.2	471.7
52.5°	361.6	376.7	410.1	439.7	449.6
55°	333.4	350.8	385.6	415.7	424.6
57.5°	306.6	324.5	361.6	392.2	401.1
60°	280.3	298.6	336.7	365.9	375.3
62.5°	251.1	272.8	312.3	340.9	348.0
65°	224.8	246.9	285.5	314.1	322.1
67.5°	197.0	221.0	259.6	285.9	293.4
70°	170.7	195.6	232.8	257.2	260.5
72.5°	142.5	167.9	205.5	221.0	221.0
75°	117.1	143.0	177.8	180.6	178.2
77.5°	89.4	118.0	140.6	135.0	129.3
80°	64.4	92.6	103.0	92.6	85.1
82.5°	43.3	67.2	62.1	49.4	43.7
85°	24.0	35.7	24.5	13.6	9.9
87.5°	8.9	8.0	2.4	2.4	2.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)