

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: P311891

Luminaire Tested: **14FCZ2-29-UNV-L83050-HRP-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: P311891
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-29-UNV-L83050-HRP-CA08-W2A-U-3500K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 2125.0 lumens
Efficiency: N/A
Efficacy: 89.3 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

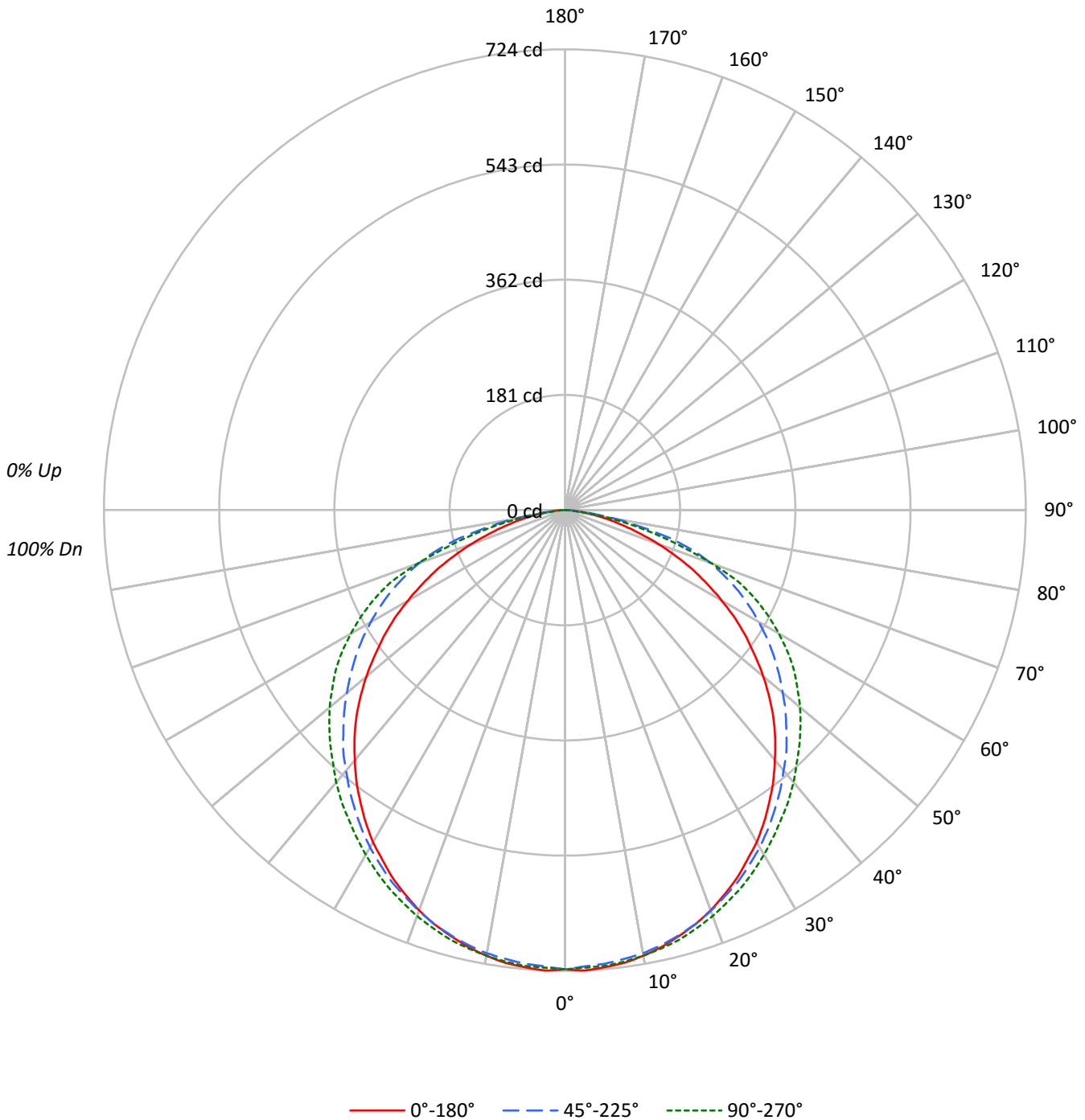
Input Watts (W): 23.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1942	1942	1942
5°	1948	1933	1942
10°	1943	1932	1943
15°	1930	1927	1945
20°	1917	1919	1944
25°	1897	1912	1944
30°	1873	1902	1943
35°	1840	1888	1947
40°	1803	1878	1962
45°	1765	1872	1983
50°	1703	1871	2020
55°	1630	1881	2063
60°	1532	1895	2089
65°	1412	1915	2102
70°	1231	1919	1935
75°	1015	1785	1563
80°	798	1285	1046
85°	618	494	247



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.3	3.2
10°-20°	196.0	9.2
20°-30°	297.7	14.0
30°-40°	360.7	17.0
40°-50°	380.1	17.9
50°-60°	354.9	16.7
60°-70°	283.6	13.3
70°-80°	156.1	7.3
80°-90°	27.5	1.3
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°	562.1	26.5
0°-40°	922.8	43.4
0°-60°	1657.8	78.0
0°-90°	2125.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2125.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	722	722	722	722	722	
5°	721	719	716	720	719	69
15°	693	693	692	698	698	196
25°	639	640	644	654	655	294
35°	560	565	575	589	593	350
45°	464	472	492	514	521	357
55°	348	365	401	429	440	310
65°	222	250	301	325	330	218
75°	98	140	172	154	150	105
85°	20	25	16	10	8	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	721.7	721.7	721.7	721.7	721.7
2.5°	724.3	722.3	717.7	721.7	719.7
5°	721.0	719.0	715.6	720.3	719.0
7.5°	717.7	715.0	711.6	717.0	715.6
10°	711.0	709.0	707.0	711.6	711.0
12.5°	703.0	702.3	700.3	705.6	705.0
15°	692.9	692.9	691.6	698.3	698.3
17.5°	682.2	681.6	682.2	689.6	688.9
20°	669.5	669.5	670.2	678.9	678.9
22.5°	654.2	654.8	656.8	667.5	666.9
25°	638.8	640.1	644.1	653.5	654.8
27.5°	620.1	623.4	628.1	639.5	640.8
30°	602.7	604.7	612.1	622.8	625.4
32.5°	582.0	586.0	594.0	606.1	609.4
35°	560.0	565.3	574.7	589.4	592.7
37.5°	537.9	542.6	555.3	570.6	576.7
40°	513.2	521.2	534.6	551.9	558.6
42.5°	489.1	497.1	515.2	533.2	539.2
45°	463.7	472.4	491.8	513.8	521.2
47.5°	435.7	445.7	470.4	493.8	501.8
50°	406.9	419.6	447.0	473.1	482.4
52.5°	376.9	392.9	424.3	451.7	460.4
55°	347.5	364.8	400.9	429.0	439.7
57.5°	317.4	336.1	376.9	408.9	415.0
60°	284.7	307.4	352.1	380.2	388.2
62.5°	252.6	278.6	326.8	353.5	360.2
65°	221.8	249.9	300.7	325.4	330.1
67.5°	188.4	221.8	272.0	294.7	296.0
70°	156.4	195.1	243.9	254.6	245.9
72.5°	125.0	166.4	211.2	202.5	195.1
75°	97.6	139.7	171.7	154.4	150.3
77.5°	72.2	114.3	122.9	113.6	106.2
80°	51.5	90.2	82.9	70.8	67.5
82.5°	35.4	56.8	45.4	35.4	30.7
85°	20.0	25.4	16.0	10.0	8.0
87.5°	8.7	6.0	3.3	2.7	2.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)