

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: P311918

Luminaire Tested: **14FCZ2-35-UNV-L83050-HRP-CA08-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: P311918
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: 14FCZ2-35-UNV-L83050-HRP-CA08-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC 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: 2709.0 lumens
Efficiency: N/A
Efficacy: 87.7 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

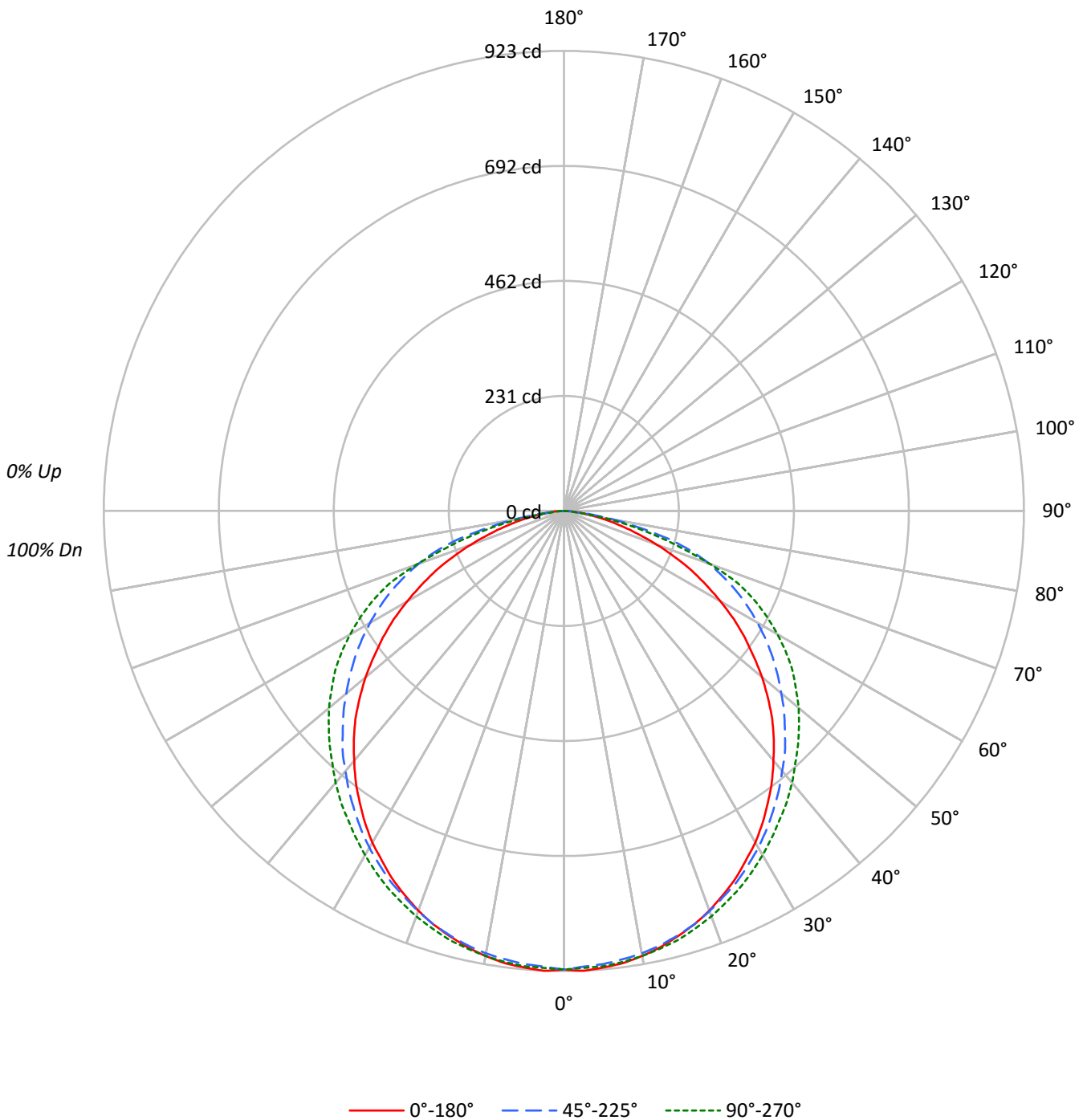
Input Watts (W): 30.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2476	2476	2476
5°	2483	2464	2476
10°	2477	2463	2477
15°	2461	2456	2480
20°	2444	2447	2479
25°	2418	2438	2479
30°	2388	2425	2477
35°	2345	2407	2482
40°	2298	2394	2501
45°	2250	2386	2528
50°	2172	2386	2575
55°	2078	2398	2630
60°	1953	2416	2664
65°	1801	2441	2679
70°	1568	2446	2467
75°	1293	2276	1993
80°	1017	1636	1333
85°	790	630	315



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.1	3.2
10°-20°	249.9	9.2
20°-30°	379.5	14.0
30°-40°	459.9	17.0
40°-50°	484.6	17.9
50°-60°	452.4	16.7
60°-70°	361.5	13.3
70°-80°	198.9	7.3
80°-90°	35.1	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°	716.6	26.5
0°-40°	1176.4	43.4
0°-60°	2113.4	78.0
0°-90°	2709.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2709.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	920	920	920	920	920	
5°	919	917	912	918	917	87
15°	883	883	882	890	890	249
25°	814	816	821	833	835	375
35°	714	721	733	751	756	447
45°	591	602	627	655	664	455
55°	443	465	511	547	560	395
65°	283	319	383	415	421	278
75°	124	178	219	197	192	134
85°	26	32	20	13	10	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	920.0	920.0	920.0	920.0	920.0
2.5°	923.4	920.8	914.9	920.0	917.4
5°	919.1	916.6	912.3	918.3	916.6
7.5°	914.9	911.5	907.2	914.0	912.3
10°	906.4	903.8	901.2	907.2	906.4
12.5°	896.1	895.3	892.7	899.5	898.7
15°	883.4	883.4	881.7	890.2	890.2
17.5°	869.7	868.9	869.7	879.1	878.2
20°	853.5	853.5	854.4	865.5	865.5
22.5°	834.0	834.8	837.4	851.0	850.1
25°	814.4	816.1	821.2	833.1	834.8
27.5°	790.5	794.8	800.7	815.2	816.9
30°	768.4	770.9	780.3	793.9	797.3
32.5°	742.0	747.1	757.3	772.6	776.9
35°	713.8	720.7	732.6	751.3	755.6
37.5°	685.7	691.7	707.9	727.5	735.1
40°	654.2	664.4	681.5	703.6	712.1
42.5°	623.5	633.8	656.8	679.8	687.4
45°	591.2	602.3	627.0	655.1	664.4
47.5°	555.4	568.2	599.7	629.5	639.7
50°	518.8	535.0	569.9	603.1	615.0
52.5°	480.4	500.9	540.9	575.8	586.9
55°	443.0	465.1	511.1	546.9	560.5
57.5°	404.6	428.5	480.4	521.3	529.0
60°	362.9	391.8	448.9	484.7	494.9
62.5°	322.0	355.2	416.6	450.6	459.1
65°	282.8	318.6	383.3	414.8	420.8
67.5°	240.2	282.8	346.7	375.7	377.4
70°	199.3	248.7	310.9	324.6	313.5
72.5°	159.3	212.1	269.2	258.1	248.7
75°	124.4	178.0	218.9	196.8	191.7
77.5°	92.0	145.7	156.7	144.8	135.4
80°	65.6	115.0	105.6	90.3	86.0
82.5°	45.1	72.4	57.9	45.1	39.2
85°	25.6	32.4	20.4	12.8	10.2
87.5°	11.1	7.7	4.3	3.4	3.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)