

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: P312235

Luminaire Tested: **14FCZ2-35-UNV-L83050-CP250-W2A-U-3000K**

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: P312235
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: 14FCZ2-35-UNV-L83050-CP250-W2A-U-3000K
Description: 1'X4' TROFFER LED MODULE,RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 3000K 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: 2954.0 lumens
Efficiency: N/A
Efficacy: 100.5 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

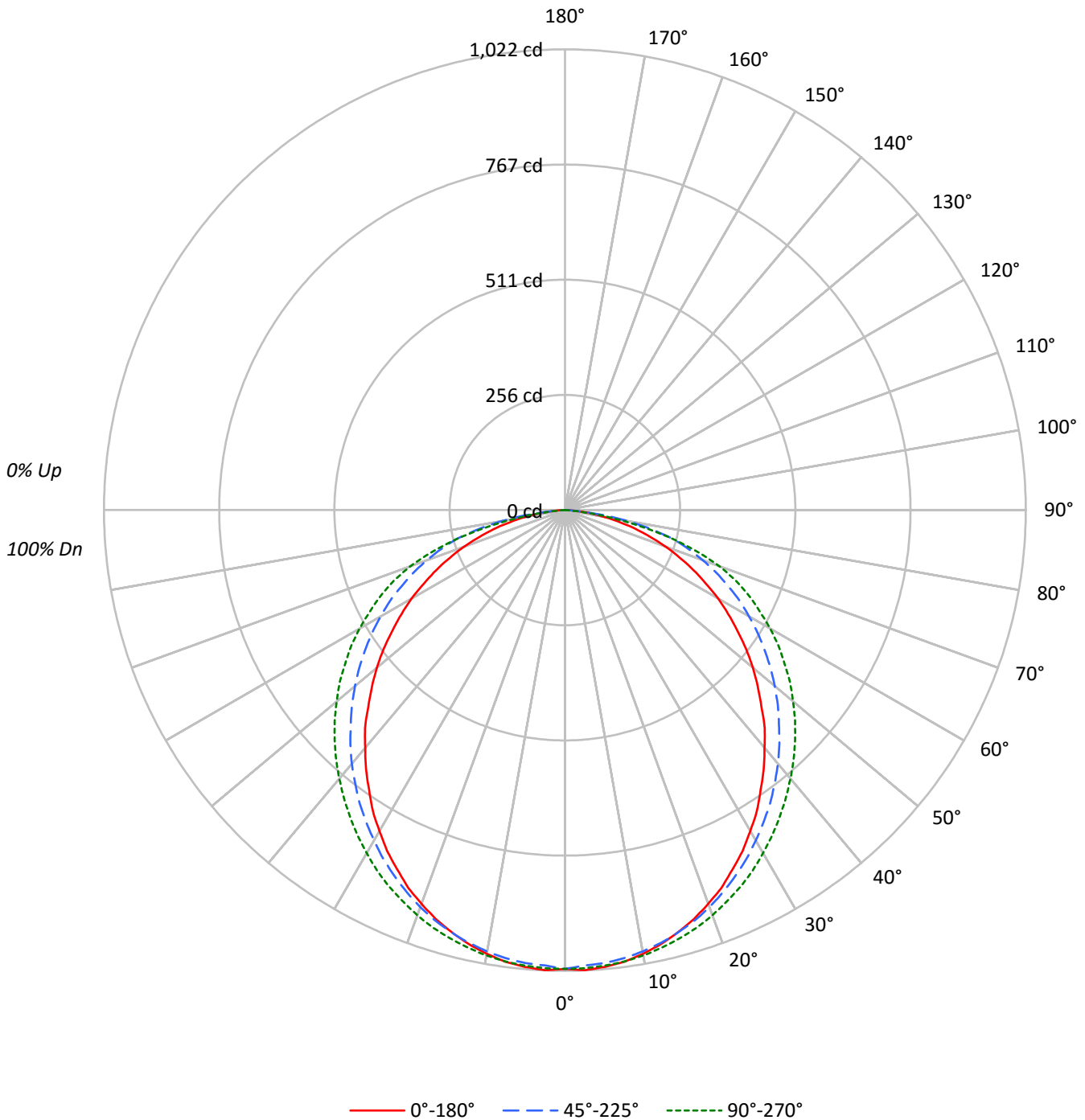
Input Watts (W): 29.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	90	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	79	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	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	39	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2739	2739	2739
5°	2747	2724	2740
10°	2730	2716	2741
15°	2701	2703	2740
20°	2662	2684	2739
25°	2611	2658	2736
30°	2554	2630	2730
35°	2486	2607	2729
40°	2420	2582	2733
45°	2346	2554	2747
50°	2278	2542	2766
55°	2191	2534	2791
60°	2113	2538	2829
65°	2004	2546	2873
70°	1881	2565	2871
75°	1705	2589	2595
80°	1398	2236	1847
85°	1037	1059	426



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.3	3.3
10°-20°	275.1	9.3
20°-30°	414.4	14.0
30°-40°	497.3	16.8
40°-50°	518.3	17.5
50°-60°	479.8	16.2
60°-70°	387.7	13.1
70°-80°	236.4	8.0
80°-90°	48.8	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°	785.8	26.6
0°-40°	1283.0	43.4
0°-60°	2281.1	77.2
0°-90°	2954.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2954.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1018	1018	1018	1018	1018	
5°	1017	1014	1008	1016	1014	97
15°	970	970	970	983	983	273
25°	879	885	895	918	922	405
35°	757	769	794	823	831	474
45°	616	635	671	709	722	477
55°	467	491	540	582	595	418
65°	315	346	400	440	451	311
75°	164	200	249	253	250	172
85°	34	50	34	19	14	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1017.7	1017.7	1017.7	1017.7	1017.7
2.5°	1021.6	1018.3	1011.1	1018.3	1017.0
5°	1017.0	1014.4	1008.4	1015.7	1014.4
7.5°	1010.4	1007.8	1002.5	1011.1	1009.8
10°	999.2	997.9	994.0	1003.8	1003.2
12.5°	986.0	985.4	983.4	994.6	994.0
15°	969.6	970.2	970.2	983.4	983.4
17.5°	951.1	952.5	955.1	969.6	971.6
20°	929.4	932.0	937.3	953.8	956.4
22.5°	907.0	909.0	916.9	936.6	939.3
25°	879.3	884.6	895.1	917.5	921.5
27.5°	853.0	857.6	872.1	895.1	901.7
30°	822.0	829.3	846.4	871.4	878.7
32.5°	792.4	800.3	820.1	849.0	855.6
35°	756.8	768.7	793.7	822.7	830.6
37.5°	724.5	735.7	764.1	795.7	804.9
40°	689.0	702.8	735.1	768.7	777.9
42.5°	656.0	669.2	704.1	738.4	750.9
45°	616.5	635.0	671.2	708.7	721.9
47.5°	580.3	598.7	640.2	680.4	692.3
50°	544.1	563.8	607.3	648.8	660.7
52.5°	506.5	527.6	574.4	615.9	629.7
55°	467.0	491.4	540.1	582.3	594.8
57.5°	429.5	454.5	506.5	549.3	561.9
60°	392.6	418.3	471.6	512.5	525.6
62.5°	351.7	382.0	437.4	477.5	487.4
65°	314.8	345.8	399.8	440.0	451.2
67.5°	276.0	309.6	363.6	400.5	411.0
70°	239.1	274.0	326.0	360.3	364.9
72.5°	199.6	235.1	287.8	309.6	309.6
75°	164.0	200.2	249.0	252.9	249.6
77.5°	125.1	165.3	196.9	189.0	181.1
80°	90.2	129.8	144.3	129.8	119.2
82.5°	60.6	94.2	86.9	69.2	61.3
85°	33.6	50.1	34.3	19.1	13.8
87.5°	12.5	11.2	3.3	3.3	3.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)