

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: P311935

Luminaire Tested: **14FCZ2-35-UNV-L83050-HRP-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: P311935
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-CP250-W2A-U-3000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 2241.0 lumens
Efficiency: N/A
Efficacy: 76.2 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

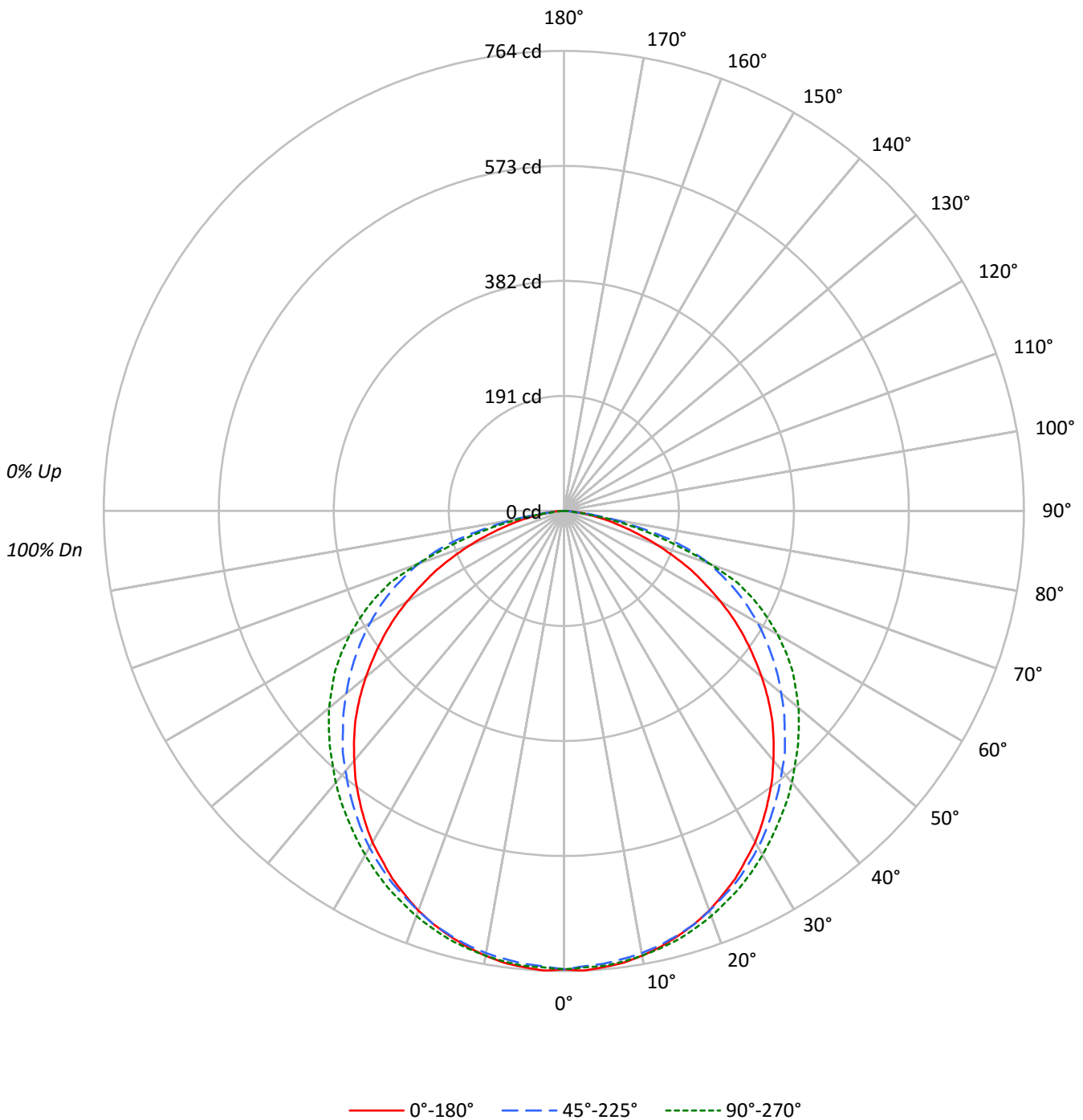
Input Watts (W): 29.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2048	2048	2048
5°	2054	2039	2048
10°	2049	2037	2049
15°	2036	2032	2052
20°	2022	2024	2050
25°	2000	2017	2051
30°	1975	2006	2050
35°	1940	1991	2054
40°	1901	1980	2069
45°	1861	1974	2092
50°	1797	1973	2130
55°	1719	1984	2175
60°	1616	1999	2203
65°	1490	2019	2216
70°	1297	2024	2040
75°	1070	1883	1649
80°	841	1354	1103
85°	651	522	262



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.1	3.2
10°-20°	206.7	9.2
20°-30°	314.0	14.0
30°-40°	380.4	17.0
40°-50°	400.9	17.9
50°-60°	374.3	16.7
60°-70°	299.1	13.3
70°-80°	164.6	7.3
80°-90°	29.0	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°	592.8	26.5
0°-40°	973.2	43.4
0°-60°	1748.3	78.0
0°-90°	2241.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2241.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	761	761	761	761	761	
5°	760	758	755	760	758	72
15°	731	731	729	736	736	206
25°	674	675	679	689	691	310
35°	590	596	606	622	625	369
45°	489	498	519	542	550	376
55°	366	385	423	452	464	327
65°	234	264	317	343	348	230
75°	103	147	181	163	159	111
85°	21	27	17	11	8	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	761.1	761.1	761.1	761.1	761.1
2.5°	763.9	761.8	756.8	761.1	758.9
5°	760.4	758.2	754.7	759.6	758.2
7.5°	756.8	754.0	750.5	756.1	754.7
10°	749.8	747.7	745.6	750.5	749.8
12.5°	741.3	740.6	738.5	744.1	743.4
15°	730.8	730.8	729.3	736.4	736.4
17.5°	719.5	718.8	719.5	727.2	726.5
20°	706.1	706.1	706.8	716.0	716.0
22.5°	689.9	690.6	692.7	704.0	703.3
25°	673.7	675.1	679.3	689.2	690.6
27.5°	653.9	657.5	662.4	674.4	675.8
30°	635.6	637.7	645.5	656.8	659.6
32.5°	613.8	618.0	626.5	639.1	642.7
35°	590.5	596.2	606.0	621.5	625.1
37.5°	567.3	572.2	585.6	601.8	608.1
40°	541.2	549.7	563.7	582.1	589.1
42.5°	515.8	524.3	543.3	562.3	568.7
45°	489.0	498.2	518.6	541.9	549.7
47.5°	459.5	470.0	496.1	520.8	529.2
50°	429.2	442.5	471.4	498.9	508.8
52.5°	397.4	414.4	447.5	476.4	485.5
55°	366.4	384.8	422.8	452.4	463.7
57.5°	334.7	354.5	397.4	431.3	437.6
60°	300.2	324.2	371.4	401.0	409.4
62.5°	266.4	293.9	344.6	372.8	379.8
65°	234.0	263.6	317.1	343.2	348.1
67.5°	198.7	234.0	286.8	310.8	312.2
70°	164.9	205.8	257.2	268.5	259.3
72.5°	131.8	175.5	222.7	213.5	205.8
75°	102.9	147.3	181.1	162.8	158.6
77.5°	76.1	120.5	129.7	119.8	112.0
80°	54.3	95.1	87.4	74.7	71.2
82.5°	37.3	59.9	47.9	37.3	32.4
85°	21.1	26.8	16.9	10.6	8.5
87.5°	9.2	6.3	3.5	2.8	2.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)