

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: P311913

Luminaire Tested: **14FCZ2-29-UNV-L83050-HRP-CP250-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: P311913
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-CP250-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB 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: 2091.0 lumens
Efficiency: N/A
Efficacy: 83.6 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

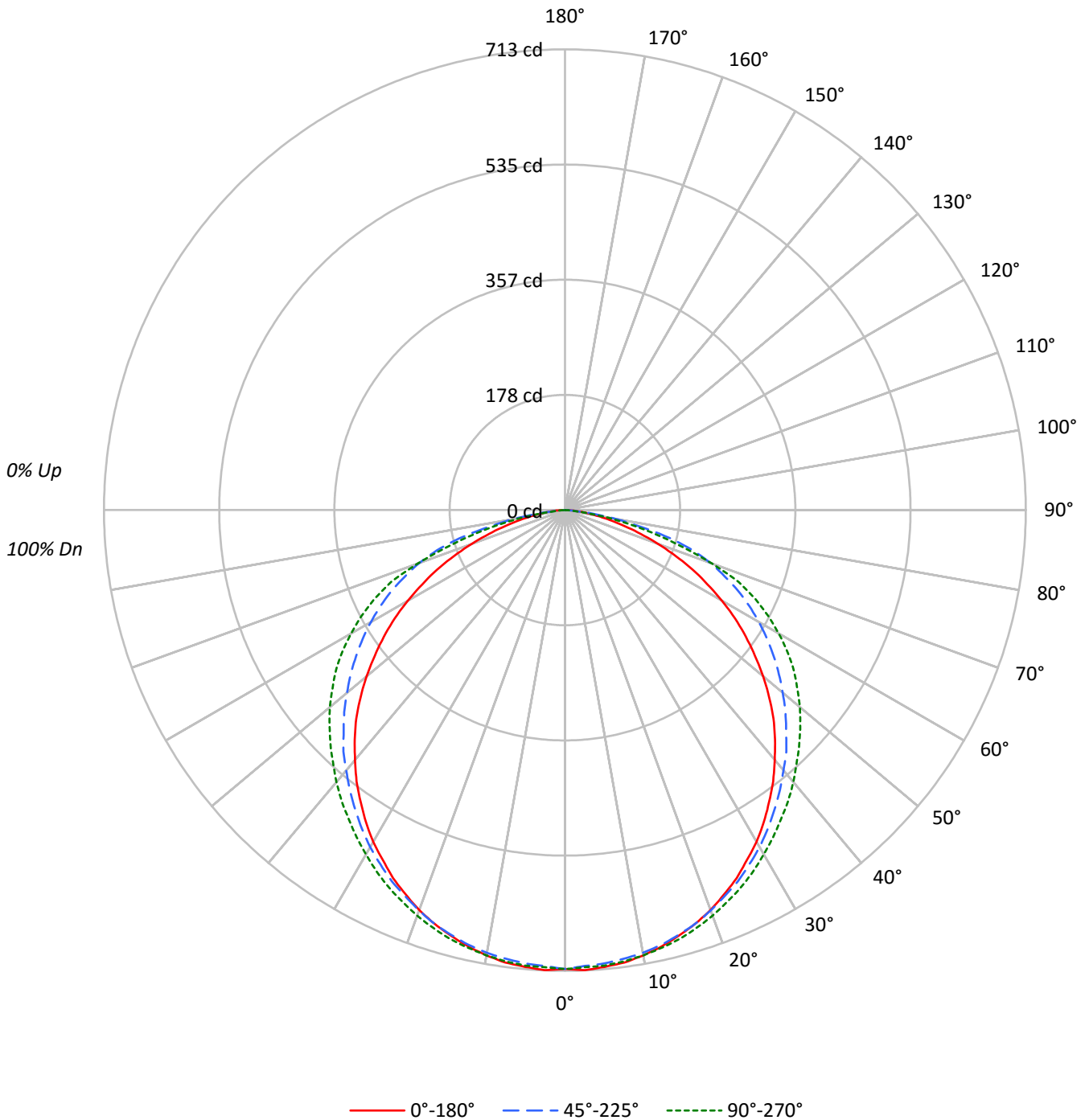
Input Watts (W): 25
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1911	1911	1911
5°	1917	1902	1911
10°	1912	1901	1912
15°	1899	1896	1914
20°	1887	1889	1913
25°	1866	1882	1913
30°	1843	1872	1912
35°	1810	1858	1916
40°	1774	1848	1931
45°	1737	1842	1952
50°	1676	1842	1987
55°	1604	1851	2030
60°	1507	1865	2056
65°	1390	1884	2068
70°	1211	1888	1904
75°	998	1757	1538
80°	784	1263	1029
85°	608	488	244



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.2	3.2
10°-20°	192.9	9.2
20°-30°	293.0	14.0
30°-40°	355.0	17.0
40°-50°	374.0	17.9
50°-60°	349.2	16.7
60°-70°	279.1	13.3
70°-80°	153.5	7.3
80°-90°	27.1	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°	553.1	26.5
0°-40°	908.0	43.4
0°-60°	1631.3	78.0
0°-90°	2091.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2091.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	710	710	710	710	710	
5°	710	708	704	709	708	67
15°	682	682	680	687	687	192
25°	629	630	634	643	644	289
35°	551	556	566	580	583	345
45°	456	465	484	506	513	351
55°	342	359	394	422	433	305
65°	218	246	296	320	325	215
75°	96	137	169	152	148	103
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°	710.1	710.1	710.1	710.1	710.1
2.5°	712.7	710.8	706.2	710.1	708.1
5°	709.5	707.5	704.2	708.8	707.5
7.5°	706.2	703.5	700.3	705.5	704.2
10°	699.6	697.6	695.6	700.3	699.6
12.5°	691.7	691.0	689.1	694.3	693.7
15°	681.8	681.8	680.5	687.1	687.1
17.5°	671.3	670.7	671.3	678.6	677.9
20°	658.8	658.8	659.5	668.0	668.0
22.5°	643.7	644.4	646.3	656.9	656.2
25°	628.6	629.9	633.8	643.0	644.4
27.5°	610.2	613.5	618.1	629.2	630.6
30°	593.1	595.0	602.3	612.8	615.4
32.5°	572.7	576.6	584.5	596.4	599.7
35°	551.0	556.3	565.5	579.9	583.2
37.5°	529.3	533.9	546.4	561.5	567.4
40°	505.0	512.9	526.0	543.1	549.7
42.5°	481.3	489.2	506.9	524.7	530.6
45°	456.3	464.9	483.9	505.6	512.9
47.5°	428.7	438.6	462.9	485.9	493.8
50°	400.4	412.9	439.9	465.5	474.7
52.5°	370.8	386.6	417.5	444.5	453.0
55°	341.9	359.0	394.5	422.1	432.6
57.5°	312.3	330.7	370.8	402.4	408.3
60°	280.1	302.5	346.5	374.1	382.0
62.5°	248.5	274.2	321.5	347.8	354.4
65°	218.3	245.9	295.9	320.2	324.8
67.5°	185.4	218.3	267.6	290.0	291.3
70°	153.9	192.0	240.0	250.5	242.0
72.5°	123.0	163.7	207.8	199.2	192.0
75°	96.0	137.4	169.0	151.9	147.9
77.5°	71.0	112.4	121.0	111.8	104.5
80°	50.6	88.8	81.5	69.7	66.4
82.5°	34.8	55.9	44.7	34.8	30.2
85°	19.7	25.0	15.8	9.9	7.9
87.5°	8.5	5.9	3.3	2.6	2.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)