

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: P311912

Luminaire Tested: **14FCZ2-29-UNV-L83050-HRP-CP250-W2A-U-4000K**

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: P311912
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-4000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 4000K 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: 2071.0 lumens
Efficiency: N/A
Efficacy: 85.2 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

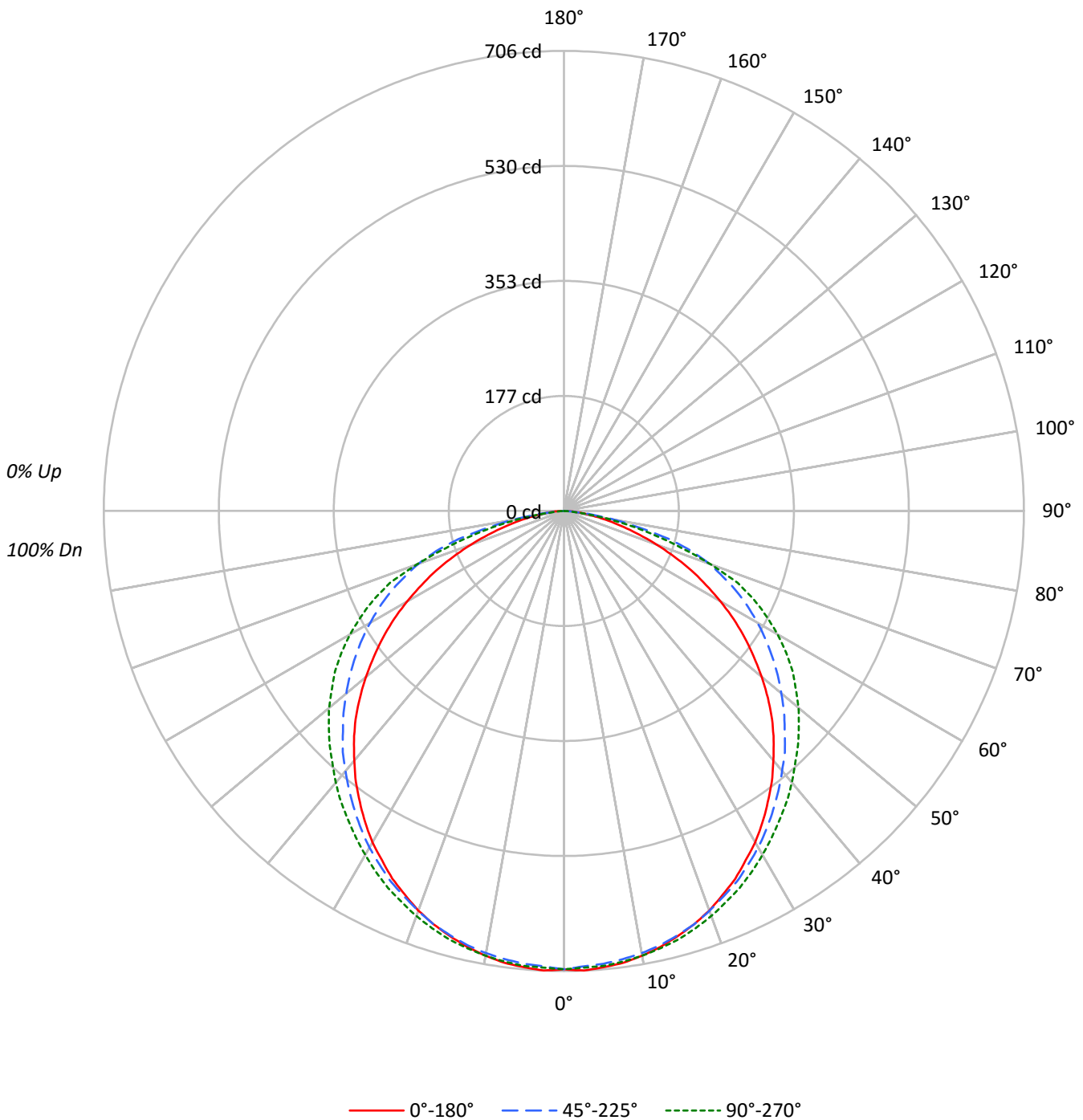
Input Watts (W): 24.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1893	1893	1893
5°	1898	1884	1893
10°	1893	1883	1893
15°	1881	1878	1896
20°	1869	1871	1895
25°	1849	1864	1895
30°	1825	1853	1894
35°	1793	1840	1897
40°	1757	1830	1912
45°	1720	1824	1933
50°	1660	1824	1968
55°	1589	1833	2010
60°	1493	1847	2037
65°	1377	1866	2048
70°	1199	1870	1886
75°	989	1740	1523
80°	776	1252	1020
85°	602	482	241



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.6	3.2
10°-20°	191.1	9.2
20°-30°	290.2	14.0
30°-40°	351.6	17.0
40°-50°	370.5	17.9
50°-60°	345.9	16.7
60°-70°	276.4	13.3
70°-80°	152.1	7.3
80°-90°	26.9	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°	547.8	26.5
0°-40°	899.4	43.4
0°-60°	1615.7	78.0
0°-90°	2071.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2071.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	703	703	703	703	703	
5°	703	701	698	702	701	67
15°	675	675	674	680	680	191
25°	623	624	628	637	638	287
35°	546	551	560	574	578	341
45°	452	460	479	501	508	348
55°	339	356	391	418	428	302
65°	216	244	293	317	322	213
75°	95	136	167	150	146	102
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°	703.3	703.3	703.3	703.3	703.3
2.5°	705.9	704.0	699.4	703.3	701.4
5°	702.7	700.7	697.5	702.0	700.7
7.5°	699.4	696.8	693.6	698.8	697.5
10°	692.9	690.9	689.0	693.6	692.9
12.5°	685.1	684.4	682.5	687.7	687.0
15°	675.3	675.3	674.0	680.5	680.5
17.5°	664.9	664.2	664.9	672.1	671.4
20°	652.5	652.5	653.2	661.6	661.6
22.5°	637.5	638.2	640.2	650.6	649.9
25°	622.6	623.9	627.8	636.9	638.2
27.5°	604.3	607.6	612.2	623.2	624.5
30°	587.4	589.4	596.5	606.9	609.5
32.5°	567.2	571.1	578.9	590.7	593.9
35°	545.7	550.9	560.1	574.4	577.6
37.5°	524.2	528.8	541.2	556.1	562.0
40°	500.1	508.0	521.0	537.9	544.4
42.5°	476.7	484.5	502.1	519.7	525.5
45°	451.9	460.4	479.3	500.8	508.0
47.5°	424.6	434.4	458.5	481.3	489.1
50°	396.6	409.0	435.7	461.1	470.2
52.5°	367.3	382.9	413.5	440.2	448.7
55°	338.6	355.6	390.7	418.1	428.5
57.5°	309.3	327.6	367.3	398.5	404.4
60°	277.4	299.6	343.2	370.5	378.4
62.5°	246.2	271.6	318.4	344.5	351.0
65°	216.2	243.6	293.1	317.1	321.7
67.5°	183.6	216.2	265.0	287.2	288.5
70°	152.4	190.2	237.7	248.1	239.7
72.5°	121.8	162.2	205.8	197.3	190.2
75°	95.1	136.1	167.4	150.4	146.5
77.5°	70.3	111.4	119.8	110.7	103.5
80°	50.1	87.9	80.8	69.0	65.8
82.5°	34.5	55.4	44.3	34.5	30.0
85°	19.5	24.7	15.6	9.8	7.8
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)