

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: P312087

Luminaire Tested: **14FCZ2-35-UNV-L83050-RDP-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: P312087
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-43)
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-RDP-CP250-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT , 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: 2107.0 lumens
Efficiency: N/A
Efficacy: 69.8 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.28 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

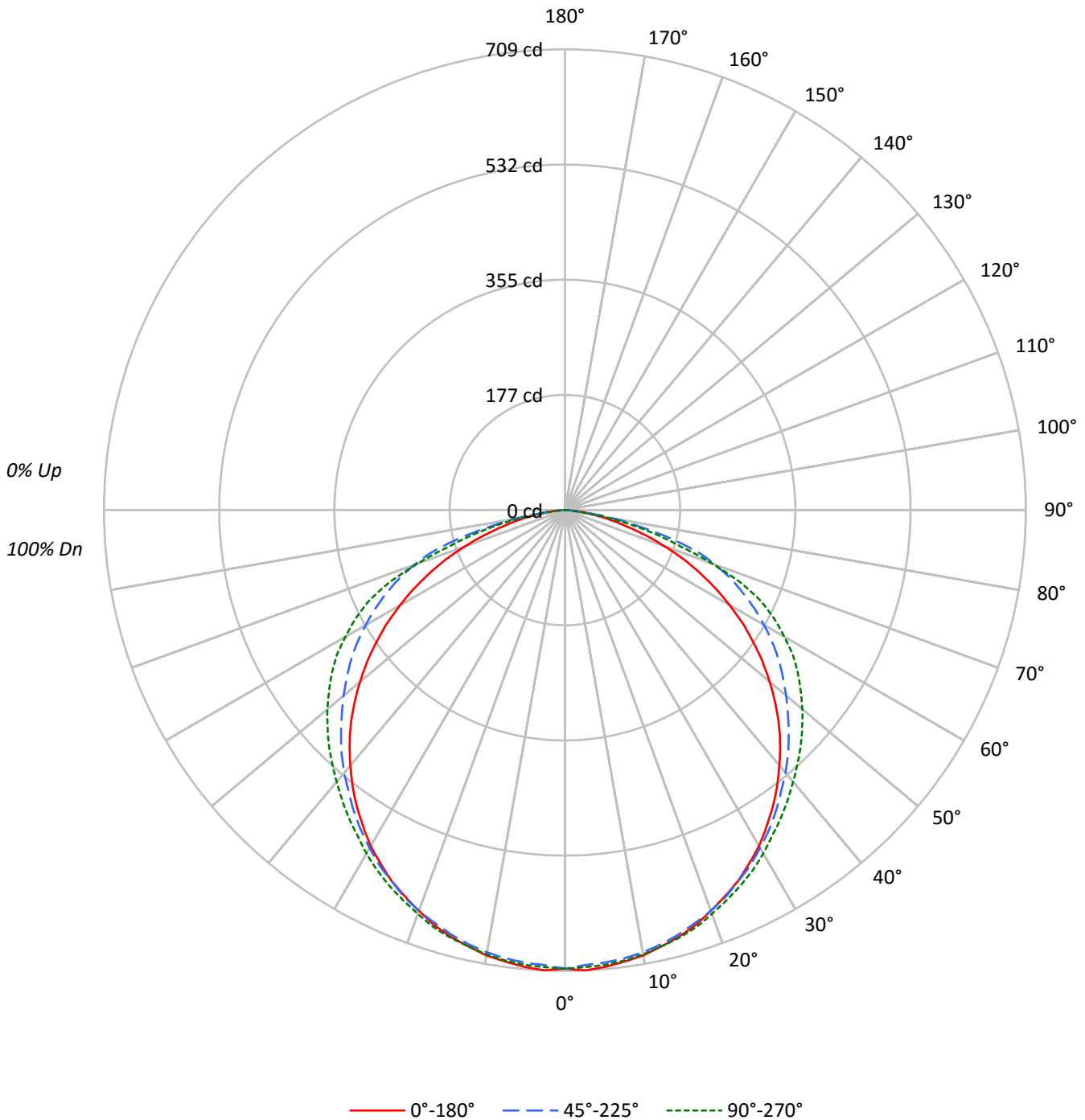
Input Watts (W): 30.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	80	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	50	42	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	25	51	38	31	25	37	30	25	36	30	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1899	1899	1899
5°	1906	1888	1897
10°	1901	1888	1897
15°	1893	1884	1897
20°	1879	1879	1894
25°	1871	1871	1895
30°	1855	1866	1896
35°	1832	1859	1902
40°	1803	1855	1918
45°	1772	1853	1953
50°	1721	1859	1997
55°	1659	1883	2053
60°	1576	1904	2098
65°	1456	1927	2126
70°	1294	1941	1902
75°	1043	1745	1522
80°	815	1224	995
85°	559	355	253



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.8	3.2
10°-20°	191.6	9.1
20°-30°	291.8	13.8
30°-40°	355.4	16.9
40°-50°	377.1	17.9
50°-60°	355.9	16.9
60°-70°	287.3	13.6
70°-80°	155.9	7.4
80°-90°	25.2	1.2
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°	550.2	26.1
0°-40°	905.6	43.0
0°-60°	1638.6	77.8
0°-90°	2107.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2107.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	706	706	706	706	706	
5°	706	704	699	704	702	67
15°	679	678	676	681	681	192
25°	630	628	630	637	638	290
35°	558	561	566	577	579	349
45°	466	472	487	505	513	358
55°	354	368	401	428	438	316
65°	229	257	303	327	334	227
75°	100	146	168	151	146	110
85°	18	20	12	10	8	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	705.7	705.7	705.7	705.7	705.7
2.5°	709.0	705.7	700.8	705.7	704.0
5°	705.7	704.0	699.1	704.0	702.4
7.5°	700.8	700.8	695.8	699.1	699.1
10°	695.8	694.2	690.9	695.8	694.2
12.5°	687.6	685.9	684.3	689.2	687.6
15°	679.4	677.7	676.1	681.0	681.0
17.5°	669.5	667.9	666.2	672.8	672.8
20°	656.3	656.3	656.3	662.9	661.3
22.5°	643.2	643.2	644.8	651.4	649.8
25°	630.0	628.4	630.0	636.6	638.2
27.5°	613.6	615.2	616.9	623.4	625.1
30°	597.1	598.8	600.4	608.6	610.3
32.5°	577.4	580.7	584.0	593.8	593.8
35°	557.6	560.9	565.9	577.4	579.0
37.5°	536.3	539.5	546.1	559.3	562.6
40°	513.2	518.2	528.0	541.2	546.1
42.5°	490.2	496.8	508.3	523.1	529.7
45°	465.5	472.1	486.9	505.0	513.2
47.5°	439.2	447.4	465.5	488.6	495.1
50°	411.2	422.8	444.1	468.8	477.0
52.5°	383.3	396.4	422.8	449.1	457.3
55°	353.7	368.5	401.4	427.7	437.6
57.5°	324.1	340.5	378.3	406.3	416.2
60°	292.8	312.5	353.7	381.6	389.9
62.5°	261.5	284.6	329.0	357.0	363.5
65°	228.6	256.6	302.7	327.3	333.9
67.5°	197.4	230.3	276.4	294.4	294.4
70°	164.5	200.7	246.7	251.7	241.8
72.5°	131.6	172.7	213.8	195.8	187.5
75°	100.3	146.4	167.8	151.3	146.4
77.5°	75.7	118.4	118.4	108.6	105.3
80°	52.6	90.5	79.0	69.1	64.2
82.5°	34.5	51.0	41.1	32.9	28.0
85°	18.1	19.7	11.5	9.9	8.2
87.5°	6.6	3.3	1.6	3.3	1.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)