

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: P312110

Luminaire Tested: **14FCZ2-39-UNV-L83050-RDP-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: P312110
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: 14FCZ2-39-UNV-L83050-RDP-CP250-W2A-U-3000K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT , 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: 2092.0 lumens
Efficiency: N/A
Efficacy: 63.0 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

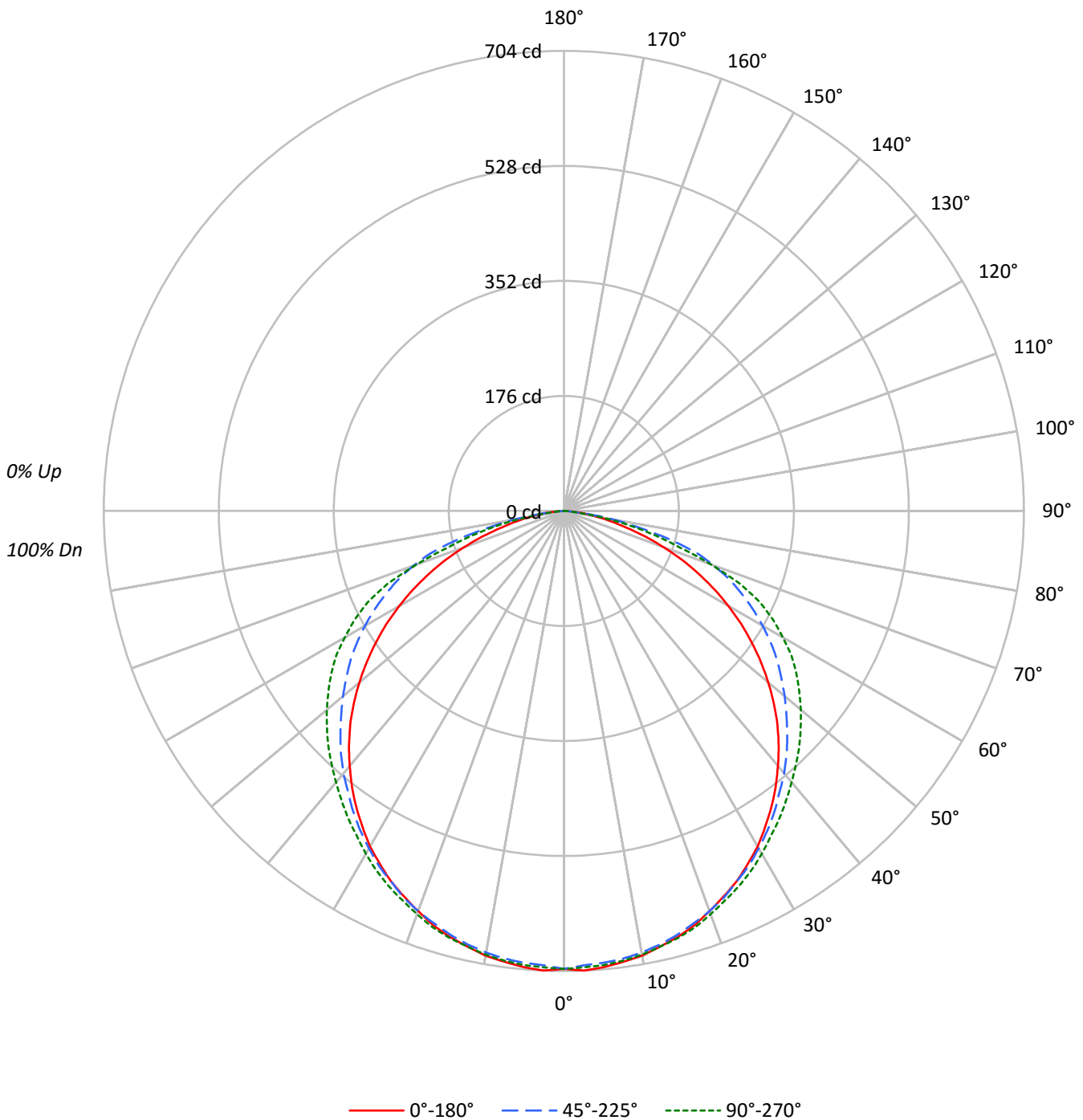
Input Watts (W): 33.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1886	1886	1886
5°	1893	1875	1884
10°	1888	1874	1883
15°	1879	1870	1884
20°	1866	1866	1880
25°	1857	1857	1882
30°	1842	1852	1883
35°	1819	1846	1889
40°	1790	1842	1905
45°	1759	1840	1939
50°	1709	1846	1983
55°	1647	1870	2038
60°	1565	1890	2083
65°	1445	1913	2111
70°	1285	1928	1889
75°	1036	1732	1512
80°	810	1215	987
85°	556	352	253



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.3	3.2
10°-20°	190.3	9.1
20°-30°	289.7	13.8
30°-40°	352.9	16.9
40°-50°	374.4	17.9
50°-60°	353.3	16.9
60°-70°	285.3	13.6
70°-80°	154.8	7.4
80°-90°	25.0	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°	546.3	26.1
0°-40°	899.2	43.0
0°-60°	1626.9	77.8
0°-90°	2092.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2092.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	701	701	701	701	701	
5°	701	699	694	699	697	67
15°	674	673	671	676	676	190
25°	626	624	626	632	634	288
35°	554	557	562	573	575	346
45°	462	469	483	501	510	356
55°	351	366	398	425	434	314
65°	227	255	300	325	332	225
75°	100	145	167	150	145	109
85°	18	20	11	10	8	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	700.7	700.7	700.7	700.7	700.7
2.5°	703.9	700.7	695.8	700.7	699.0
5°	700.7	699.0	694.1	699.0	697.4
7.5°	695.8	695.8	690.9	694.1	694.1
10°	690.9	689.2	686.0	690.9	689.2
12.5°	682.7	681.1	679.4	684.3	682.7
15°	674.5	672.9	671.3	676.2	676.2
17.5°	664.7	663.1	661.5	668.0	668.0
20°	651.7	651.7	651.7	658.2	656.6
22.5°	638.6	638.6	640.2	646.8	645.1
25°	625.5	623.9	625.5	632.1	633.7
27.5°	609.2	610.8	612.5	619.0	620.6
30°	592.9	594.5	596.1	604.3	605.9
32.5°	573.3	576.5	579.8	589.6	589.6
35°	553.7	556.9	561.8	573.3	574.9
37.5°	532.4	535.7	542.2	555.3	558.6
40°	509.6	514.5	524.3	537.3	542.2
42.5°	486.7	493.2	504.7	519.4	525.9
45°	462.2	468.7	483.4	501.4	509.6
47.5°	436.1	444.2	462.2	485.1	491.6
50°	408.3	419.7	441.0	465.5	473.6
52.5°	380.5	393.6	419.7	445.9	454.0
55°	351.1	365.8	398.5	424.6	434.4
57.5°	321.8	338.1	375.6	403.4	413.2
60°	290.7	310.3	351.1	378.9	387.1
62.5°	259.7	282.6	326.6	354.4	360.9
65°	227.0	254.8	300.5	325.0	331.5
67.5°	196.0	228.7	274.4	292.4	292.4
70°	163.3	199.3	245.0	249.9	240.1
72.5°	130.7	171.5	212.3	194.4	186.2
75°	99.6	145.4	166.6	150.3	145.4
77.5°	75.1	117.6	117.6	107.8	104.5
80°	52.3	89.8	78.4	68.6	63.7
82.5°	34.3	50.6	40.8	32.7	27.8
85°	18.0	19.6	11.4	9.8	8.2
87.5°	6.5	3.3	1.6	3.3	1.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)