

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: P310076

Luminaire Tested: **24FCZ2-40-UNV-L82765-RDP-CP250-W2A-U-2700K**

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: P310076
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-40-UNV-L82765-RDP-CP250-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 2700K 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: 2119.0 lumens
Efficiency: N/A
Efficacy: 64.8 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

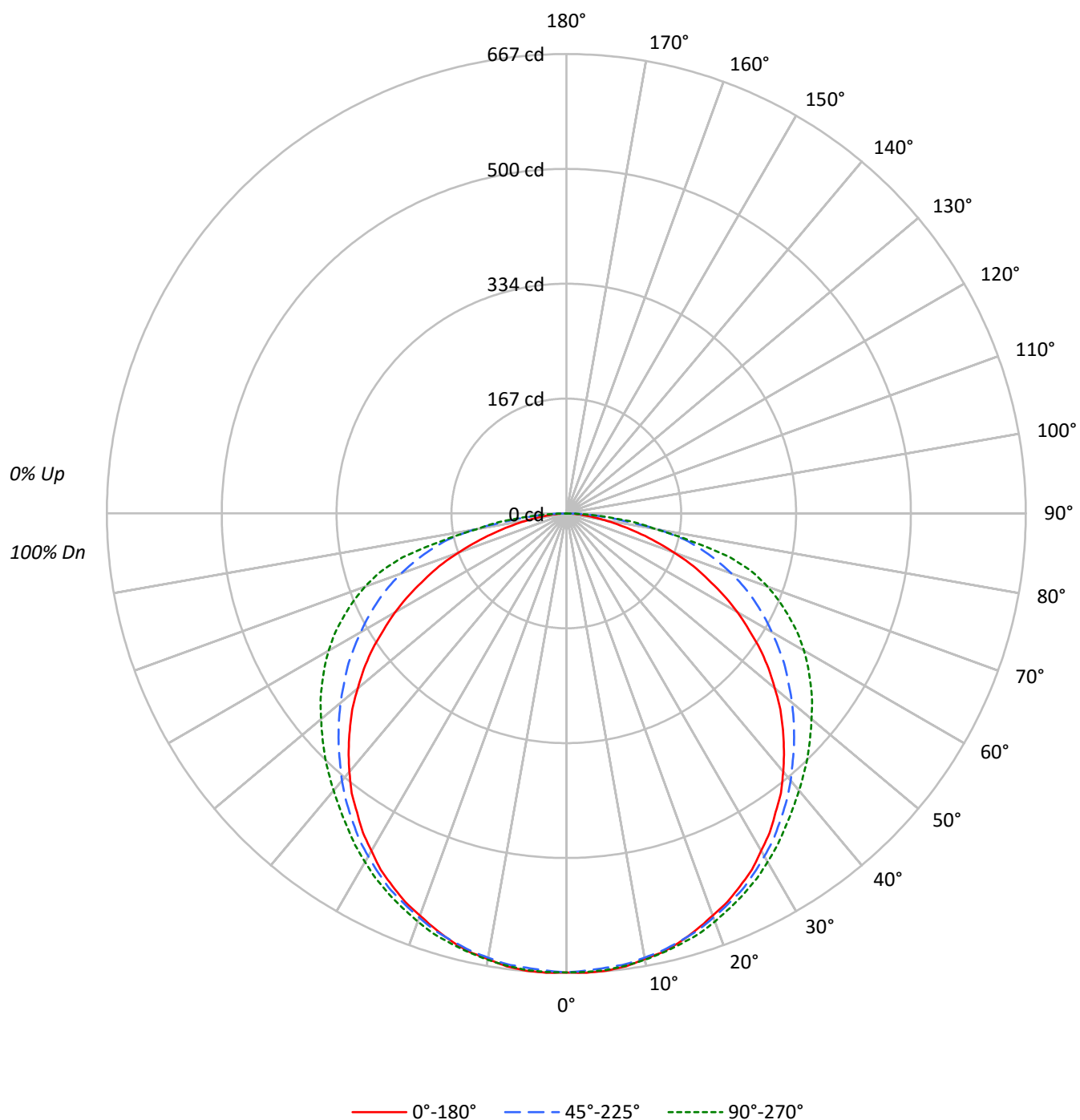
Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	897	897	897
5°	900	894	899
10°	897	895	899
15°	896	895	900
20°	889	894	903
25°	886	896	905
30°	879	893	908
35°	870	891	912
40°	860	890	923
45°	846	890	944
50°	827	895	973
55°	806	910	1016
60°	772	928	1072
65°	723	961	1138
70°	657	1005	1224
75°	557	1060	1278
80°	440	1067	1034
85°	324	812	909



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.2	3.0
10°-20°	181.9	8.6
20°-30°	278.2	13.1
30°-40°	340.1	16.0
40°-50°	362.5	17.1
50°-60°	346.6	16.4
60°-70°	293.6	13.9
70°-80°	197.3	9.3
80°-90°	55.7	2.6
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°	523.3	24.7
0°-40°	863.4	40.7
0°-60°	1572.4	74.2
0°-90°	2119.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2119.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	666	666	666	666	666	
5°	666	665	662	665	665	63
15°	643	643	642	647	646	181
25°	597	599	603	609	610	275
35°	530	534	542	553	555	332
45°	445	452	468	488	496	343
55°	344	356	388	418	433	306
65°	227	250	302	342	357	225
75°	107	146	204	239	246	115
85°	21	43	53	57	59	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	666.4	666.4	666.4	666.4	666.4
2.5°	667.4	667.4	664.3	666.4	666.4
5°	666.4	665.3	662.2	665.3	665.3
7.5°	663.2	662.2	660.1	663.2	662.2
10°	656.9	656.9	654.8	658.0	658.0
12.5°	651.7	650.6	649.5	653.8	652.7
15°	643.2	643.2	642.2	647.4	646.4
17.5°	632.7	633.8	634.8	639.0	640.1
20°	621.2	623.3	624.3	630.6	630.6
22.5°	610.7	611.7	613.8	620.1	620.1
25°	597.0	599.1	603.3	608.6	609.6
27.5°	583.3	584.4	589.6	597.0	598.0
30°	565.5	568.6	574.9	583.3	584.4
32.5°	549.7	552.9	560.2	568.6	570.7
35°	529.7	533.9	542.3	552.9	555.0
37.5°	511.9	515.0	525.5	537.1	540.2
40°	489.8	496.1	506.6	520.3	525.5
42.5°	467.7	474.0	486.6	504.5	510.8
45°	444.6	452.0	467.7	487.7	496.1
47.5°	421.5	429.9	447.7	470.9	480.3
50°	395.2	405.7	427.8	454.1	464.6
52.5°	370.0	382.6	406.8	436.2	449.8
55°	343.7	356.3	387.8	418.3	433.0
57.5°	314.3	331.1	365.8	400.4	416.2
60°	286.9	302.7	344.7	382.6	398.3
62.5°	257.5	278.5	323.7	363.7	379.4
65°	227.0	250.1	301.7	341.6	357.4
67.5°	199.7	224.9	279.6	319.5	335.3
70°	167.1	198.6	255.4	295.3	311.1
72.5°	136.6	171.3	230.2	269.1	283.8
75°	107.2	146.1	203.9	238.6	245.9
77.5°	79.9	120.9	176.6	191.3	186.0
80°	56.8	96.7	137.7	130.3	133.5
82.5°	36.8	73.6	85.1	96.7	99.8
85°	21.0	43.1	52.6	56.8	58.9
87.5°	9.5	15.8	21.0	21.0	20.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)