

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: P313560

Luminaire Tested: **24FCZ2-40-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: P313560
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-L83050-RDP-CP250-W2A-U-3000K
Description: 2'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: 2183.0 lumens
Efficiency: N/A
Efficacy: 67.0 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

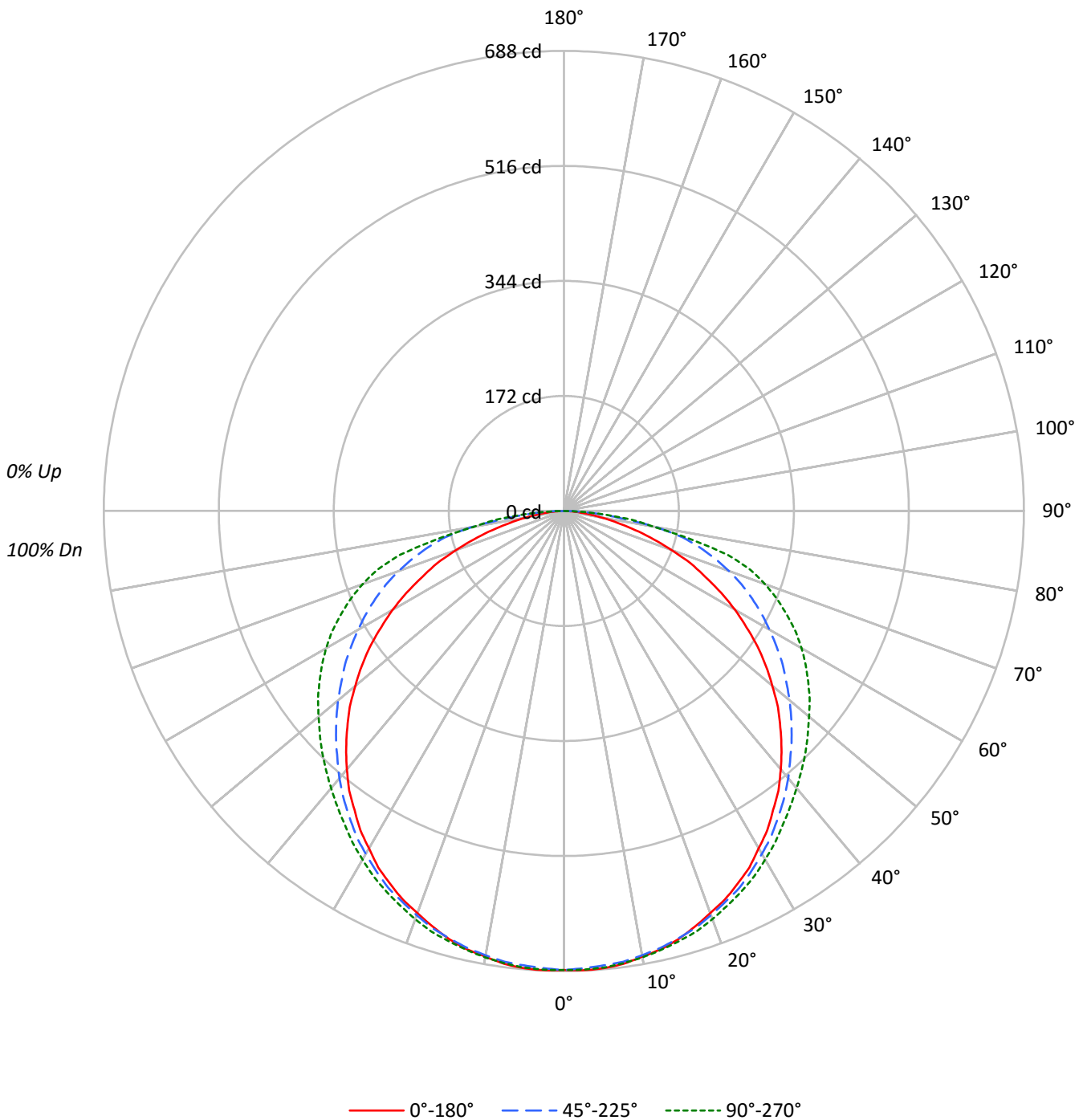
Input Watts (W): 32.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	924	924	924
5°	927	921	926
10°	925	922	926
15°	923	922	928
20°	916	921	930
25°	913	923	932
30°	905	920	935
35°	896	918	939
40°	886	917	951
45°	871	917	973
50°	852	922	1002
55°	831	937	1046
60°	795	956	1104
65°	745	989	1172
70°	677	1035	1261
75°	574	1092	1317
80°	453	1099	1065
85°	335	835	936



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.1	3.0
10°-20°	187.4	8.6
20°-30°	286.6	13.1
30°-40°	350.4	16.0
40°-50°	373.4	17.1
50°-60°	357.0	16.4
60°-70°	302.4	13.9
70°-80°	203.3	9.3
80°-90°	57.3	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°	539.1	24.7
0°-40°	889.5	40.7
0°-60°	1619.9	74.2
0°-90°	2183.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2183.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	686	686	686	686	686	
5°	686	685	682	685	685	65
15°	663	663	662	667	666	187
25°	615	617	622	627	628	283
35°	546	550	559	570	572	342
45°	458	466	482	502	511	353
55°	354	367	400	431	446	315
65°	234	258	311	352	368	232
75°	110	150	210	246	253	118
85°	22	44	54	58	61	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	686.5	686.5	686.5	686.5	686.5
2.5°	687.6	687.6	684.3	686.5	686.5
5°	686.5	685.4	682.2	685.4	685.4
7.5°	683.2	682.2	680.0	683.2	682.2
10°	676.7	676.7	674.6	677.8	677.8
12.5°	671.3	670.2	669.2	673.5	672.4
15°	662.7	662.7	661.6	667.0	665.9
17.5°	651.8	652.9	654.0	658.3	659.4
20°	639.9	642.1	643.2	649.7	649.7
22.5°	629.1	630.2	632.4	638.8	638.8
25°	615.0	617.2	621.5	626.9	628.0
27.5°	601.0	602.0	607.4	615.0	616.1
30°	582.5	585.8	592.3	601.0	602.0
32.5°	566.3	569.5	577.1	585.8	588.0
35°	545.7	550.1	558.7	569.5	571.7
37.5°	527.3	530.6	541.4	553.3	556.6
40°	504.6	511.1	521.9	536.0	541.4
42.5°	481.8	488.3	501.3	519.7	526.2
45°	458.0	465.6	481.8	502.4	511.1
47.5°	434.2	442.9	461.3	485.1	494.8
50°	407.1	418.0	440.7	467.8	478.6
52.5°	381.1	394.1	419.0	449.4	463.4
55°	354.1	367.1	399.6	431.0	446.1
57.5°	323.8	341.1	376.8	412.5	428.8
60°	295.6	311.8	355.2	394.1	410.4
62.5°	265.3	286.9	333.5	374.6	390.9
65°	233.9	257.7	310.8	351.9	368.1
67.5°	205.7	231.7	288.0	329.2	345.4
70°	172.2	204.6	263.1	304.3	320.5
72.5°	140.8	176.5	237.1	277.2	292.4
75°	110.4	150.5	210.1	245.8	253.4
77.5°	82.3	124.5	181.9	197.1	191.7
80°	58.5	99.6	141.8	134.3	137.5
82.5°	37.9	75.8	87.7	99.6	102.9
85°	21.7	44.4	54.1	58.5	60.6
87.5°	9.7	16.2	21.7	21.7	20.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)