

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: P313535

Luminaire Tested: **24FCZ2-40HE-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: P313535
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: 24FCZ2-40HE-UNV-L83050-RDP-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 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: 2197.0 lumens
Efficiency: N/A
Efficacy: 72.5 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

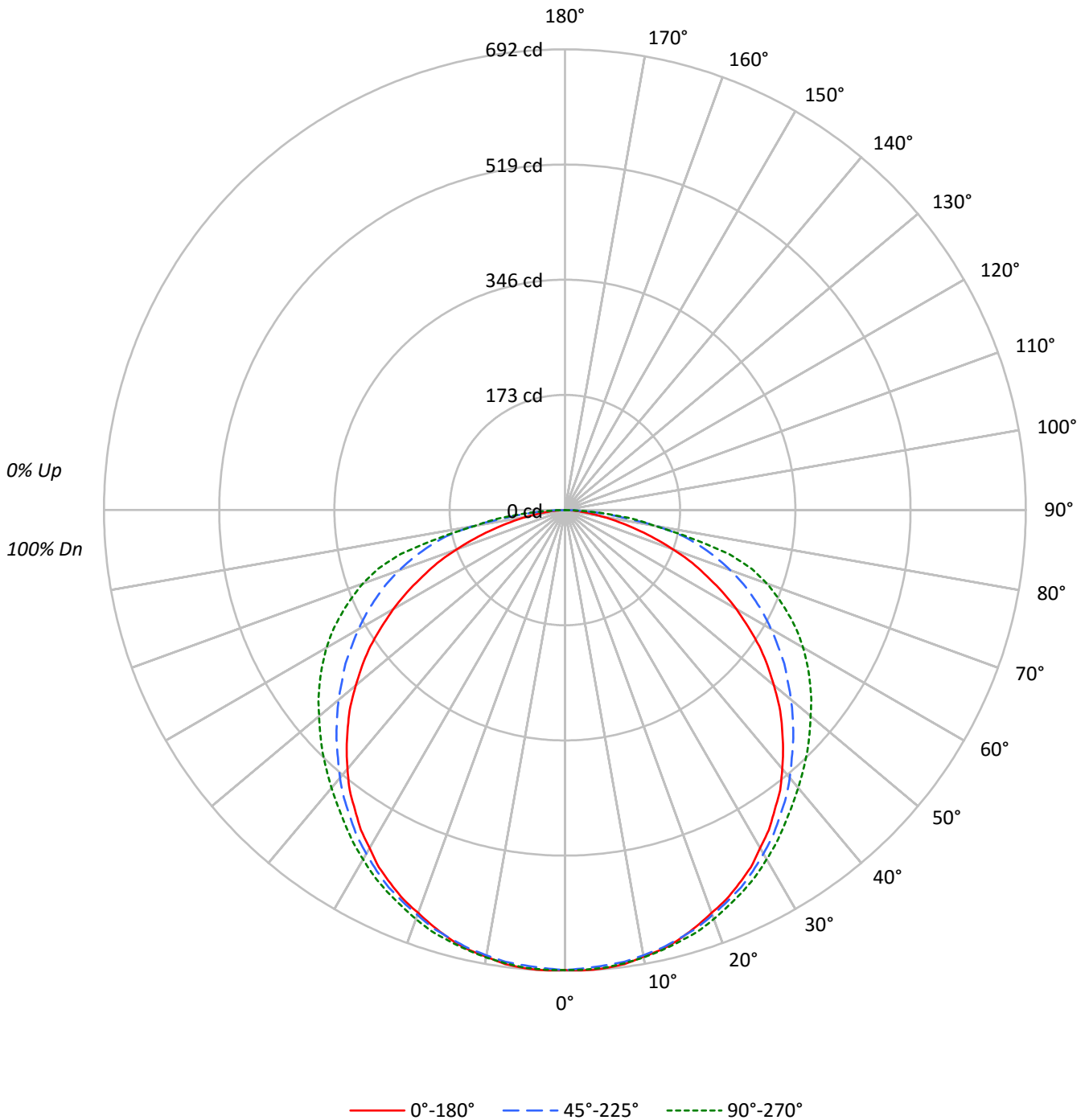
Input Watts (W): 30.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	930	930	930
5°	933	927	932
10°	931	928	932
15°	929	927	934
20°	922	927	936
25°	919	929	938
30°	911	926	941
35°	902	924	945
40°	892	923	957
45°	877	923	979
50°	858	928	1008
55°	836	943	1053
60°	801	962	1111
65°	749	996	1180
70°	682	1042	1269
75°	578	1099	1326
80°	456	1106	1072
85°	337	841	942



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.5	3.0
10°-20°	188.6	8.6
20°-30°	288.4	13.1
30°-40°	352.6	16.0
40°-50°	375.8	17.1
50°-60°	359.3	16.4
60°-70°	304.4	13.9
70°-80°	204.6	9.3
80°-90°	57.7	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°	542.6	24.7
0°-40°	895.2	40.7
0°-60°	1630.3	74.2
0°-90°	2197.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2197.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	691	691	691	691	691	
5°	691	690	686	690	690	66
15°	667	667	666	671	670	188
25°	619	621	626	631	632	285
35°	549	554	562	573	575	344
45°	461	469	485	506	514	356
55°	356	369	402	434	449	317
65°	235	259	313	354	370	234
75°	111	152	211	247	255	119
85°	22	45	54	59	61	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	690.9	690.9	690.9	690.9	690.9
2.5°	692.0	692.0	688.7	690.9	690.9
5°	690.9	689.8	686.5	689.8	689.8
7.5°	687.6	686.5	684.4	687.6	686.5
10°	681.1	681.1	678.9	682.2	682.2
12.5°	675.6	674.5	673.5	677.8	676.7
15°	666.9	666.9	665.8	671.3	670.2
17.5°	656.0	657.1	658.2	662.6	663.7
20°	644.0	646.2	647.3	653.8	653.8
22.5°	633.1	634.2	636.4	642.9	642.9
25°	619.0	621.2	625.5	631.0	632.0
27.5°	604.8	605.9	611.3	619.0	620.1
30°	586.3	589.5	596.1	604.8	605.9
32.5°	569.9	573.2	580.8	589.5	591.7
35°	549.2	553.6	562.3	573.2	575.4
37.5°	530.7	534.0	544.9	556.9	560.1
40°	507.8	514.4	525.3	539.4	544.9
42.5°	484.9	491.5	504.5	523.1	529.6
45°	461.0	468.6	484.9	505.6	514.4
47.5°	437.0	445.7	464.2	488.2	498.0
50°	409.7	420.6	443.5	470.8	481.7
52.5°	383.6	396.7	421.7	452.2	466.4
55°	356.3	369.4	402.1	433.7	449.0
57.5°	325.8	343.3	379.2	415.2	431.5
60°	297.5	313.8	357.4	396.7	413.0
62.5°	267.0	288.8	335.6	377.0	393.4
65°	235.4	259.4	312.8	354.2	370.5
67.5°	207.1	233.2	289.9	331.3	347.6
70°	173.3	206.0	264.8	306.2	322.6
72.5°	141.7	177.6	238.7	279.0	294.2
75°	111.2	151.5	211.4	247.4	255.0
77.5°	82.8	125.3	183.1	198.3	192.9
80°	58.8	100.3	142.8	135.1	138.4
82.5°	38.1	76.3	88.3	100.3	103.5
85°	21.8	44.7	54.5	58.8	61.0
87.5°	9.8	16.3	21.8	21.8	20.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)