

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: P313563

Luminaire Tested: **24FCZ2-40-UNV-L83050-RDP-CP250-W2A-U-4500K**

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: P313563
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-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 4500K 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: 2449.0 lumens
Efficiency: N/A
Efficacy: 71.4 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

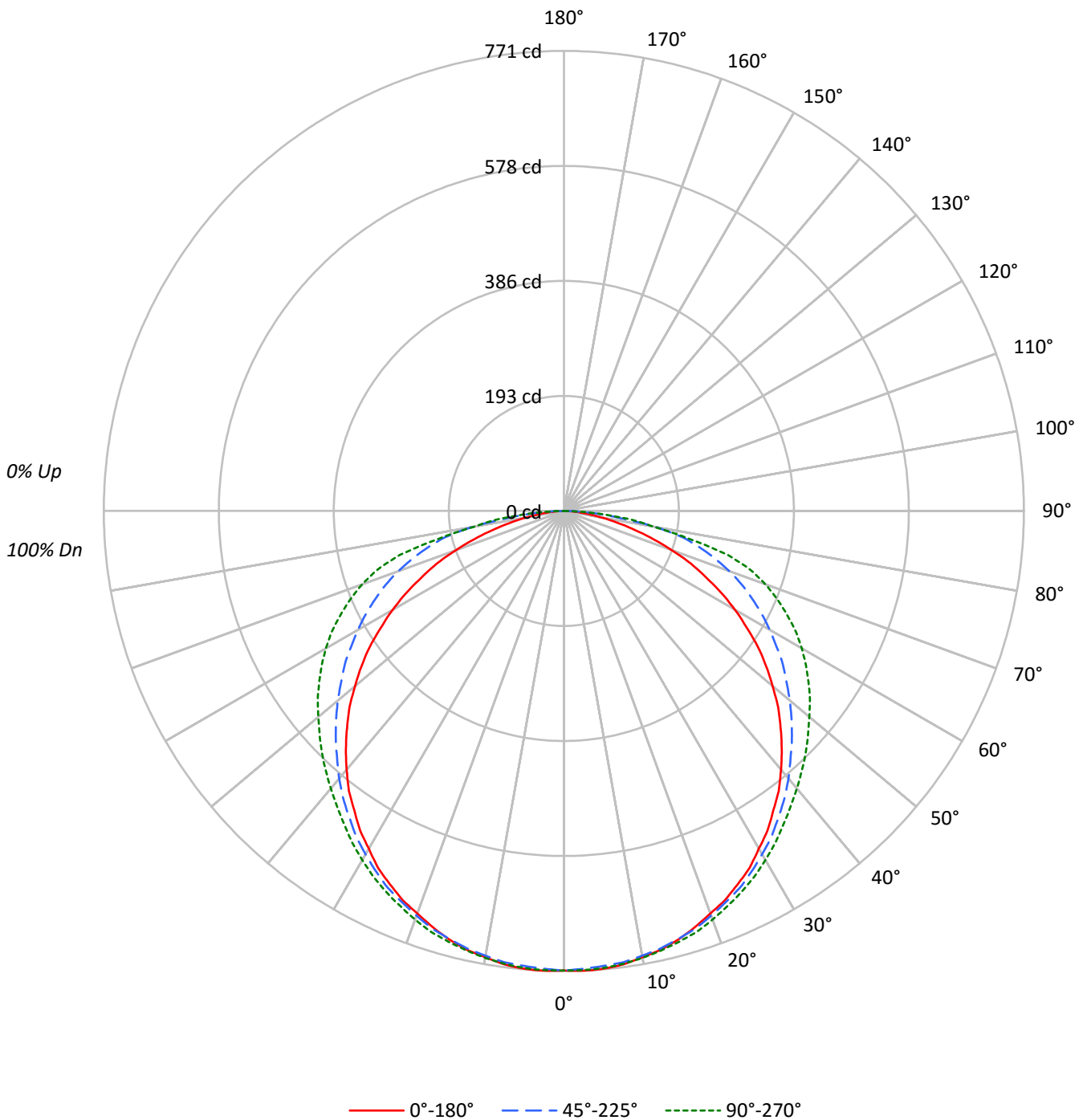
Input Watts (W): 34.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	68	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°	1036	1036	1036
5°	1040	1034	1038
10°	1037	1034	1039
15°	1036	1034	1041
20°	1028	1033	1044
25°	1024	1035	1046
30°	1015	1032	1049
35°	1006	1030	1054
40°	994	1028	1067
45°	978	1029	1091
50°	956	1035	1124
55°	932	1051	1174
60°	892	1072	1239
65°	835	1110	1315
70°	760	1161	1415
75°	644	1225	1477
80°	508	1233	1196
85°	375	937	1050



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.1	3.0
10°-20°	210.3	8.6
20°-30°	321.5	13.1
30°-40°	393.1	16.0
40°-50°	418.9	17.1
50°-60°	400.5	16.4
60°-70°	339.3	13.9
70°-80°	228.0	9.3
80°-90°	64.3	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°	604.8	24.7
0°-40°	997.9	40.7
0°-60°	1817.3	74.2
0°-90°	2449.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2449.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	770	770	770	770	770	
5°	770	769	765	769	769	73
15°	743	743	742	748	747	210
25°	690	692	697	703	704	318
35°	612	617	627	639	641	384
45°	514	522	541	564	573	396
55°	397	412	448	484	500	354
65°	262	289	349	395	413	260
75°	124	169	236	276	284	133
85°	24	50	61	66	68	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	770.1	770.1	770.1	770.1	770.1
2.5°	771.4	771.4	767.7	770.1	770.1
5°	770.1	768.9	765.3	768.9	768.9
7.5°	766.5	765.3	762.9	766.5	765.3
10°	759.2	759.2	756.8	760.4	760.4
12.5°	753.1	751.9	750.7	755.6	754.3
15°	743.4	743.4	742.2	748.3	747.1
17.5°	731.3	732.5	733.7	738.6	739.8
20°	717.9	720.3	721.6	728.8	728.8
22.5°	705.8	707.0	709.4	716.7	716.7
25°	690.0	692.4	697.3	703.3	704.5
27.5°	674.2	675.4	681.5	690.0	691.2
30°	653.5	657.2	664.5	674.2	675.4
32.5°	635.3	638.9	647.5	657.2	659.6
35°	612.2	617.1	626.8	638.9	641.4
37.5°	591.6	595.2	607.4	620.7	624.4
40°	566.1	573.4	585.5	601.3	607.4
42.5°	540.6	547.8	562.4	583.1	590.4
45°	513.8	522.3	540.6	563.6	573.4
47.5°	487.1	496.8	517.5	544.2	555.1
50°	456.7	468.9	494.4	524.8	536.9
52.5°	427.6	442.2	470.1	504.1	519.9
55°	397.2	411.8	448.2	483.5	500.5
57.5°	363.2	382.6	422.7	462.8	481.0
60°	331.6	349.8	398.4	442.2	460.4
62.5°	297.6	321.9	374.1	420.3	438.5
65°	262.4	289.1	348.6	394.8	413.0
67.5°	230.8	260.0	323.1	369.3	387.5
70°	193.1	229.6	295.2	341.3	359.6
72.5°	157.9	198.0	266.0	311.0	328.0
75°	123.9	168.8	235.7	275.7	284.2
77.5°	92.3	139.7	204.1	221.1	215.0
80°	65.6	111.8	159.1	150.6	154.3
82.5°	42.5	85.0	98.4	111.8	115.4
85°	24.3	49.8	60.7	65.6	68.0
87.5°	10.9	18.2	24.3	24.3	23.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)