

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: P313664

Luminaire Tested: **24FCZ2-50-UNV-L83050-RDP-CP250-W2A-U-5000K**

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: P313664
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: 24FCZ2-50-UNV-L83050-RDP-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 5000K 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: 3026.0 lumens
Efficiency: N/A
Efficacy: 67.5 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

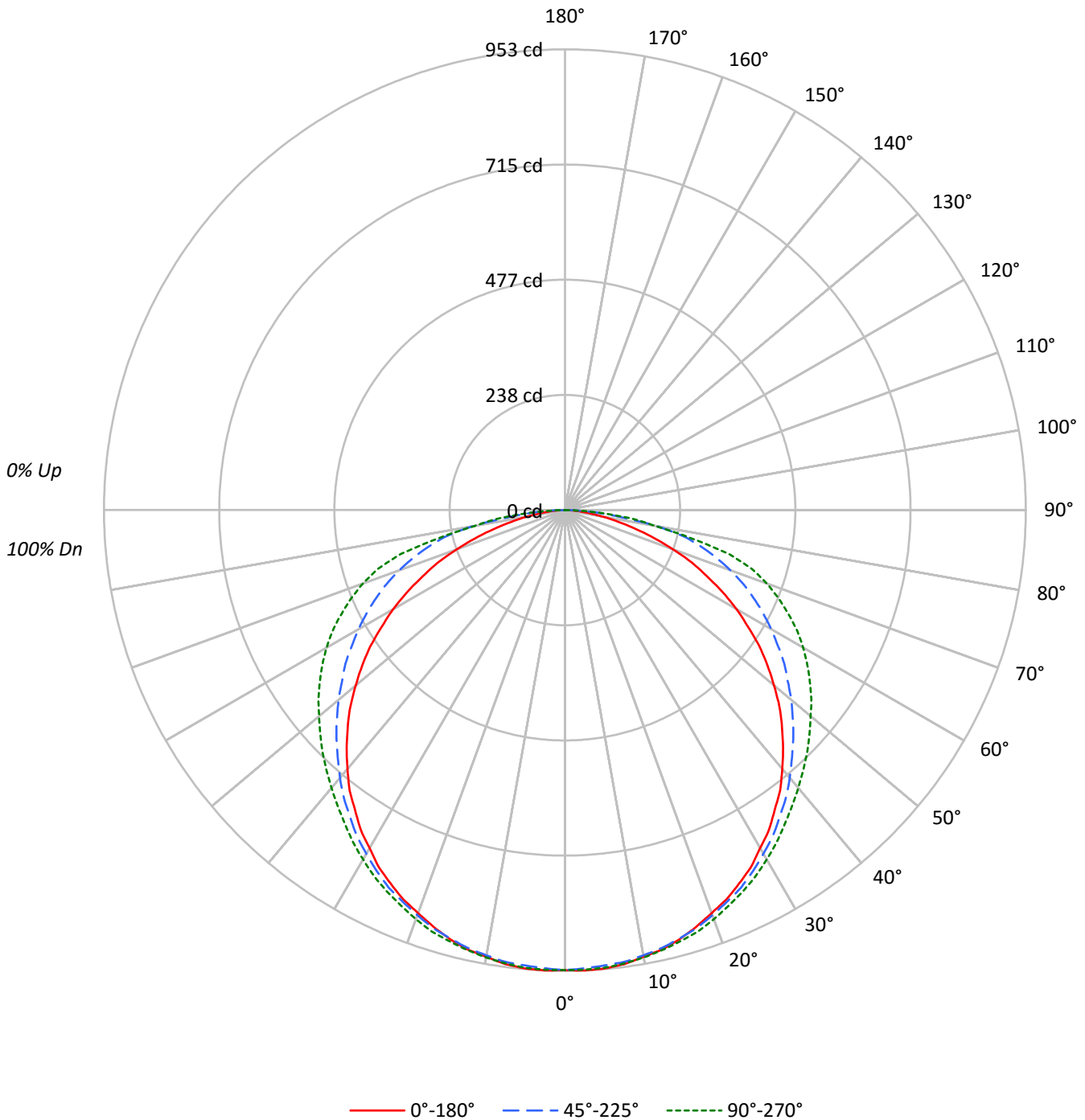
Input Watts (W): 44.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1280	1280	1280
5°	1285	1277	1283
10°	1282	1278	1284
15°	1280	1277	1286
20°	1270	1277	1290
25°	1266	1279	1292
30°	1255	1276	1297
35°	1243	1272	1302
40°	1228	1271	1318
45°	1208	1271	1348
50°	1181	1279	1389
55°	1151	1299	1451
60°	1103	1325	1531
65°	1032	1372	1625
70°	939	1435	1748
75°	796	1514	1826
80°	628	1523	1477
85°	463	1158	1298



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.3	3.0
10°-20°	259.8	8.6
20°-30°	397.3	13.1
30°-40°	485.7	16.0
40°-50°	517.6	17.1
50°-60°	494.9	16.4
60°-70°	419.2	13.9
70°-80°	281.8	9.3
80°-90°	79.5	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°	747.3	24.7
0°-40°	1233.0	40.7
0°-60°	2245.5	74.2
0°-90°	3026.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3026.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	952	952	952	952	952	
5°	952	950	946	950	950	90
15°	919	919	917	925	923	259
25°	852	856	862	869	870	393
35°	756	762	774	790	792	474
45°	635	645	668	696	708	490
55°	491	509	554	597	618	437
65°	324	357	431	488	510	322
75°	153	209	291	341	351	164
85°	30	62	75	81	84	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	951.6	951.6	951.6	951.6	951.6
2.5°	953.1	953.1	948.6	951.6	951.6
5°	951.6	950.1	945.6	950.1	950.1
7.5°	947.1	945.6	942.6	947.1	945.6
10°	938.1	938.1	935.1	939.6	939.6
12.5°	930.6	929.1	927.6	933.6	932.1
15°	918.6	918.6	917.1	924.6	923.1
17.5°	903.6	905.1	906.6	912.6	914.1
20°	887.1	890.1	891.6	900.6	900.6
22.5°	872.0	873.5	876.5	885.5	885.5
25°	852.5	855.5	861.5	869.0	870.5
27.5°	833.0	834.5	842.0	852.5	854.0
30°	807.5	812.0	821.0	833.0	834.5
32.5°	785.0	789.5	800.0	812.0	815.0
35°	756.5	762.5	774.5	789.5	792.5
37.5°	731.0	735.5	750.5	767.0	771.5
40°	699.4	708.4	723.4	743.0	750.5
42.5°	667.9	676.9	694.9	720.4	729.5
45°	634.9	645.4	667.9	696.4	708.4
47.5°	601.9	613.9	639.4	672.4	685.9
50°	564.4	579.4	610.9	648.4	663.4
52.5°	528.3	546.3	580.9	622.9	642.4
55°	490.8	508.8	553.8	597.4	618.4
57.5°	448.8	472.8	522.3	571.9	594.4
60°	409.8	432.3	492.3	546.3	568.9
62.5°	367.7	397.7	462.3	519.3	541.8
65°	324.2	357.2	430.8	487.8	510.3
67.5°	285.2	321.2	399.2	456.3	478.8
70°	238.6	283.7	364.7	421.8	444.3
72.5°	195.1	244.7	328.7	384.2	405.3
75°	153.1	208.6	291.2	340.7	351.2
77.5°	114.1	172.6	252.2	273.2	265.7
80°	81.1	138.1	196.6	186.1	190.6
82.5°	52.5	105.1	121.6	138.1	142.6
85°	30.0	61.5	75.0	81.1	84.1
87.5°	13.5	22.5	30.0	30.0	28.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)