

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: P310222

Luminaire Tested: **24FCZ2-50-UNV-L82765-RDP-CA08-W2A-U-3500K**

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: P310222
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-L82765-RDP-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 3500K 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: 3004.0 lumens
Efficiency: N/A
Efficacy: 70.0 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

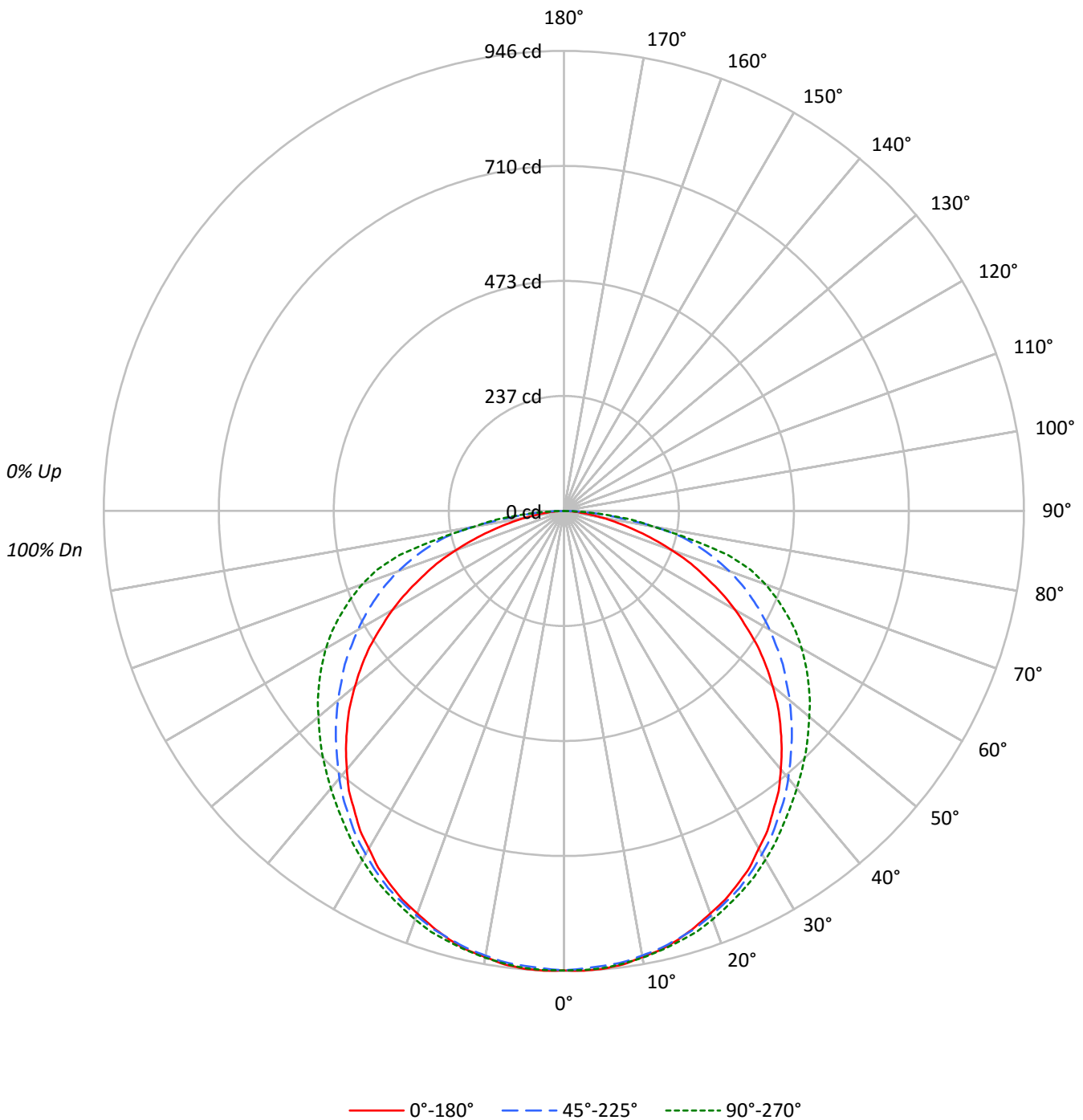
Input Watts (W): 42.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1271	1271	1271
5°	1276	1268	1274
10°	1272	1268	1274
15°	1270	1268	1277
20°	1261	1267	1280
25°	1256	1270	1283
30°	1245	1266	1287
35°	1234	1263	1292
40°	1219	1261	1309
45°	1199	1262	1338
50°	1173	1269	1379
55°	1143	1290	1440
60°	1095	1315	1520
65°	1025	1361	1613
70°	932	1424	1735
75°	790	1503	1813
80°	624	1512	1466
85°	460	1150	1288



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.6	3.0
10°-20°	257.9	8.6
20°-30°	394.4	13.1
30°-40°	482.1	16.0
40°-50°	513.8	17.1
50°-60°	491.3	16.4
60°-70°	416.2	13.9
70°-80°	279.7	9.3
80°-90°	78.9	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°	741.9	24.7
0°-40°	1224.0	40.7
0°-60°	2229.2	74.2
0°-90°	3004.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3004.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	945	945	945	945	945	
5°	945	943	939	943	943	90
15°	912	912	910	918	916	257
25°	846	849	855	863	864	390
35°	751	757	769	784	787	470
45°	630	641	663	691	703	486
55°	487	505	550	593	614	434
65°	322	355	428	484	507	320
75°	152	207	289	338	349	163
85°	30	61	74	80	83	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	944.7	944.7	944.7	944.7	944.7
2.5°	946.2	946.2	941.7	944.7	944.7
5°	944.7	943.2	938.7	943.2	943.2
7.5°	940.2	938.7	935.7	940.2	938.7
10°	931.3	931.3	928.3	932.8	932.8
12.5°	923.8	922.3	920.8	926.8	925.3
15°	911.9	911.9	910.4	917.9	916.4
17.5°	897.0	898.5	900.0	905.9	907.4
20°	880.6	883.6	885.1	894.0	894.0
22.5°	865.7	867.2	870.2	879.1	879.1
25°	846.3	849.3	855.3	862.7	864.2
27.5°	827.0	828.5	835.9	846.3	847.8
30°	801.6	806.1	815.0	827.0	828.5
32.5°	779.3	783.8	794.2	806.1	809.1
35°	751.0	756.9	768.8	783.8	786.7
37.5°	725.6	730.1	745.0	761.4	765.9
40°	694.3	703.3	718.2	737.6	745.0
42.5°	663.1	672.0	689.9	715.2	724.1
45°	630.3	640.7	663.1	691.4	703.3
47.5°	597.5	609.4	634.7	667.5	680.9
50°	560.2	575.1	606.4	643.7	658.6
52.5°	524.5	542.4	576.6	618.4	637.7
55°	487.2	505.1	549.8	593.0	613.9
57.5°	445.5	469.4	518.5	567.7	590.0
60°	406.8	429.1	488.7	542.4	564.7
62.5°	365.1	394.9	458.9	515.5	537.9
65°	321.8	354.6	427.6	484.3	506.6
67.5°	283.1	318.9	396.3	453.0	475.3
70°	236.9	281.6	362.1	418.7	441.0
72.5°	193.7	242.9	326.3	381.4	402.3
75°	152.0	207.1	289.1	338.2	348.7
77.5°	113.2	171.4	250.3	271.2	263.7
80°	80.5	137.1	195.2	184.8	189.2
82.5°	52.2	104.3	120.7	137.1	141.6
85°	29.8	61.1	74.5	80.5	83.4
87.5°	13.4	22.4	29.8	29.8	28.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)