

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: P313817

Luminaire Tested: **24FCZ2-30-UNV-L83050-CA08-W2A-U-4000K**

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: P313817
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30-UNV-L83050-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 4000K 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: 2911.9 lumens
Efficiency: N/A
Efficacy: 121.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

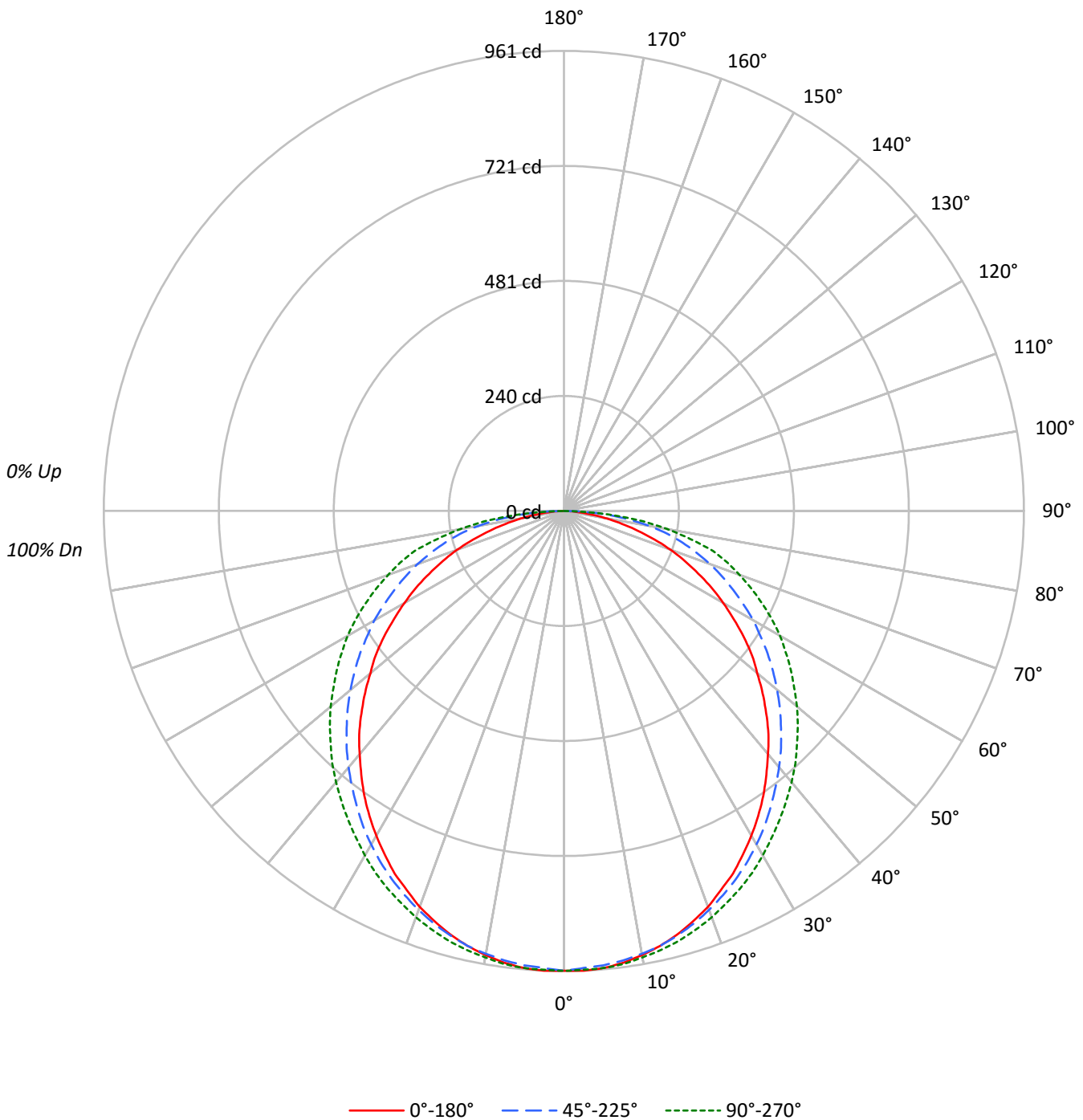
Input Watts (W): 23.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1292	1292	1292
5°	1294	1287	1294
10°	1287	1283	1294
15°	1276	1278	1295
20°	1260	1270	1293
25°	1241	1261	1292
30°	1217	1250	1291
35°	1193	1238	1292
40°	1166	1229	1300
45°	1138	1221	1311
50°	1104	1217	1331
55°	1076	1219	1358
60°	1035	1230	1404
65°	987	1243	1455
70°	935	1281	1535
75°	834	1336	1678
80°	711	1415	1714
85°	506	1402	1641



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.9	3.1
10°-20°	259.9	8.9
20°-30°	392.5	13.5
30°-40°	473.1	16.2
40°-50°	496.6	17.1
50°-60°	464.6	16.0
60°-70°	383.7	13.2
70°-80°	261.5	9.0
80°-90°	89.2	3.1
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°	743.3	25.5
0°-40°	1216.4	41.8
0°-60°	2177.6	74.8
0°-90°	2911.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2911.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	960	960	960	960	960	
5°	958	958	953	958	958	91
15°	916	917	918	928	929	258
25°	836	840	849	866	870	385
35°	726	734	754	779	786	454
45°	598	611	642	676	689	461
55°	459	477	520	562	579	410
65°	310	336	390	440	457	308
75°	160	197	257	305	323	171
85°	33	65	91	102	106	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	960.4	960.4	960.4	960.4	960.4
2.5°	961.3	960.4	955.5	960.4	959.4
5°	958.4	957.5	952.6	958.4	958.4
7.5°	951.7	951.7	946.8	953.6	954.6
10°	942.0	942.0	939.1	946.8	946.8
12.5°	930.4	930.4	930.4	938.1	939.1
15°	915.9	916.9	917.8	927.5	929.4
17.5°	898.5	900.5	903.3	914.9	916.9
20°	880.2	882.1	886.9	900.5	903.3
22.5°	857.0	861.8	868.6	884.0	886.9
25°	835.7	839.6	849.2	865.7	870.5
27.5°	809.6	815.4	828.0	845.4	852.1
30°	783.5	789.3	804.8	825.1	830.9
32.5°	755.5	764.2	780.6	801.9	808.7
35°	726.5	734.3	753.6	778.7	786.4
37.5°	694.7	705.3	726.5	753.6	763.3
40°	663.7	675.3	699.5	728.5	740.1
42.5°	632.8	644.4	671.5	704.3	715.9
45°	598.0	610.6	641.5	676.3	688.9
47.5°	563.3	578.7	612.5	649.3	662.8
50°	527.5	544.9	581.6	620.3	635.7
52.5°	495.6	512.1	550.7	592.2	606.7
55°	458.9	477.3	519.8	562.3	578.7
57.5°	421.2	441.5	486.9	533.3	549.7
60°	384.5	406.7	457.0	503.4	521.7
62.5°	348.8	371.0	423.2	471.5	489.8
65°	310.1	336.2	390.3	439.6	457.0
67.5°	273.4	301.4	358.4	406.7	424.1
70°	237.7	264.7	325.6	372.9	390.3
72.5°	199.0	229.9	290.8	340.1	358.4
75°	160.4	197.1	257.0	305.3	322.7
77.5°	124.6	162.3	222.2	261.8	270.5
80°	91.8	130.4	182.6	210.6	221.2
82.5°	58.9	97.6	139.1	159.4	168.1
85°	32.8	64.7	90.8	102.4	106.3
87.5°	13.5	28.0	36.7	41.5	41.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)