

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: P310541

Luminaire Tested: **24FCZ2-30-UNV-L82765-CA08-W2A-U-5500K**

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: P310541
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-L82765-CA08-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 5500K 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: 2884.0 lumens
Efficiency: N/A
Efficacy: 119.7 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

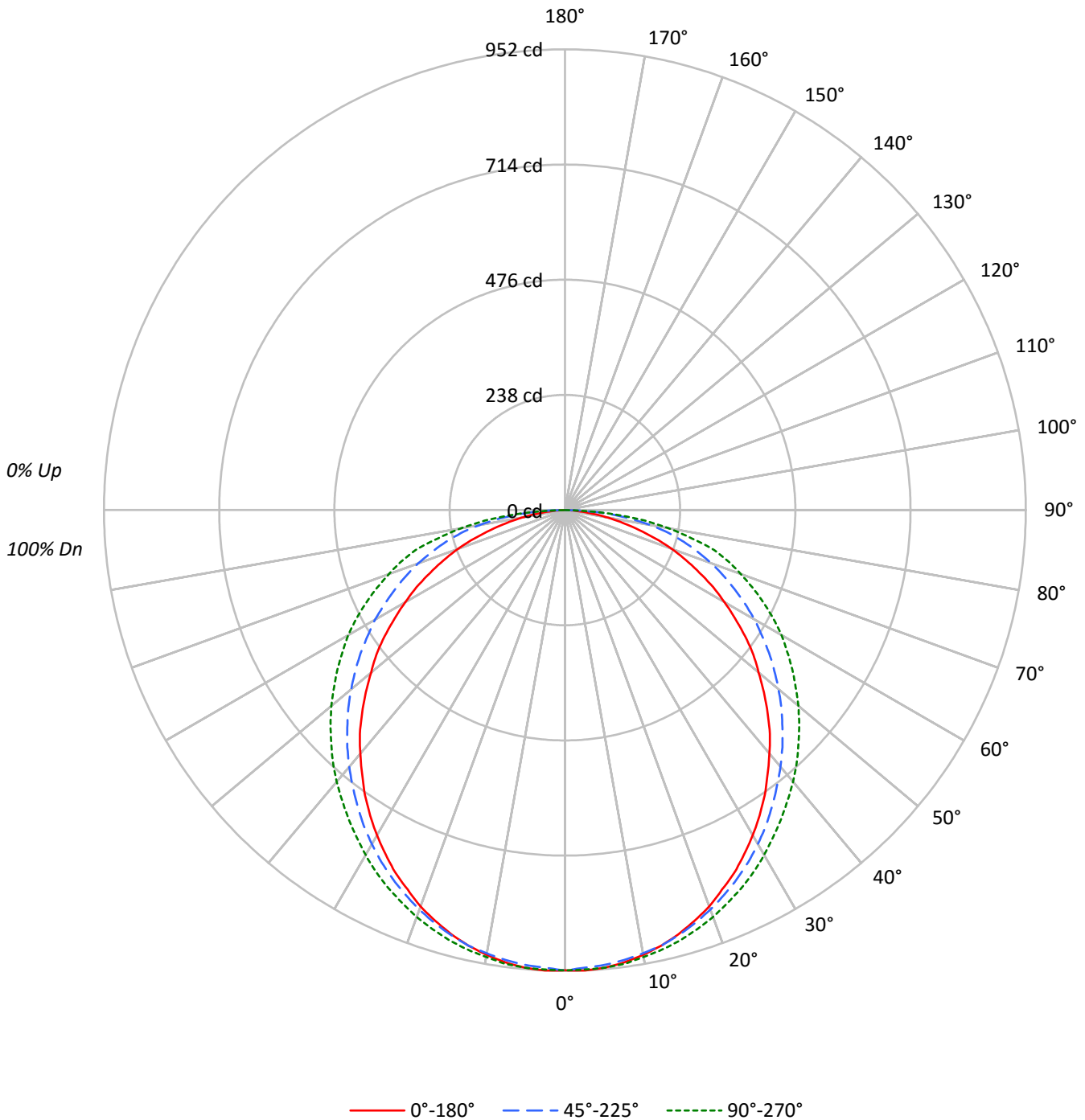
Input Watts (W): 24.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310541

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-CA08-W2A-U-5500K

Luminous Intensity Polar Plot





TEST NUMBER: P310541

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-CA08-W2A-U-5500K

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°	1280	1280	1280
5°	1282	1274	1282
10°	1275	1271	1281
15°	1264	1266	1282
20°	1248	1258	1281
25°	1229	1249	1280
30°	1206	1238	1278
35°	1182	1226	1279
40°	1155	1217	1287
45°	1127	1209	1298
50°	1093	1206	1318
55°	1066	1208	1345
60°	1025	1218	1390
65°	978	1231	1441
70°	926	1269	1521
75°	826	1323	1661
80°	704	1401	1698
85°	502	1388	1626



TEST NUMBER: P310541

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-CA08-W2A-U-5500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.0	3.1
10°-20°	257.4	8.9
20°-30°	388.7	13.5
30°-40°	468.5	16.2
40°-50°	491.9	17.1
50°-60°	460.2	16.0
60°-70°	380.0	13.2
70°-80°	259.0	9.0
80°-90°	88.3	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°	736.1	25.5
0°-40°	1204.7	41.8
0°-60°	2156.7	74.8
0°-90°	2884.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2884.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	951	951	951	951	951	
5°	949	948	944	949	949	90
15°	907	908	909	919	920	256
25°	828	832	841	857	862	381
35°	720	727	746	771	779	450
45°	592	605	635	670	682	457
55°	454	473	515	557	573	406
65°	307	333	387	435	453	305
75°	159	195	254	302	320	169
85°	32	64	90	101	105	41
90°	0	0	0	0	0	



TEST NUMBER: P310541

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-CA08-W2A-U-5500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	951.1	951.1	951.1	951.1	951.1
2.5°	952.1	951.1	946.3	951.1	950.2
5°	949.2	948.2	943.5	949.2	949.2
7.5°	942.5	942.5	937.7	944.4	945.4
10°	932.9	932.9	930.1	937.7	937.7
12.5°	921.5	921.5	921.5	929.1	930.1
15°	907.1	908.1	909.0	918.6	920.5
17.5°	889.9	891.8	894.7	906.1	908.1
20°	871.7	873.6	878.4	891.8	894.7
22.5°	848.7	853.5	860.2	875.5	878.4
25°	827.7	831.5	841.1	857.3	862.1
27.5°	801.8	807.6	820.0	837.3	843.9
30°	776.0	781.8	797.1	817.2	822.9
32.5°	748.3	756.9	773.1	794.2	800.9
35°	719.6	727.2	746.4	771.2	778.9
37.5°	688.0	698.5	719.6	746.4	755.9
40°	657.4	668.8	692.8	721.5	733.0
42.5°	626.7	638.2	665.0	697.6	709.0
45°	592.3	604.7	635.4	669.8	682.2
47.5°	557.8	573.2	606.6	643.0	656.4
50°	522.4	539.7	576.0	614.3	629.6
52.5°	490.9	507.1	545.4	586.6	600.9
55°	454.5	472.7	514.8	556.9	573.2
57.5°	417.2	437.3	482.3	528.2	544.5
60°	380.8	402.8	452.6	498.5	516.7
62.5°	345.4	367.4	419.1	466.9	485.1
65°	307.2	333.0	386.6	435.4	452.6
67.5°	270.8	298.5	355.0	402.8	420.1
70°	235.4	262.2	322.5	369.3	386.6
72.5°	197.1	227.7	288.0	336.8	355.0
75°	158.8	195.2	254.5	302.4	319.6
77.5°	123.4	160.8	220.1	259.3	267.9
80°	90.9	129.2	180.8	208.6	219.1
82.5°	58.4	96.6	137.8	157.9	166.5
85°	32.5	64.1	89.9	101.4	105.3
87.5°	13.4	27.7	36.4	41.1	41.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)