

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: P310493

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-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: P310493
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: 24FCZ2-30HE-UNV-L82765-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 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: 2801.0 lumens
Efficiency: N/A
Efficacy: 131.5 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

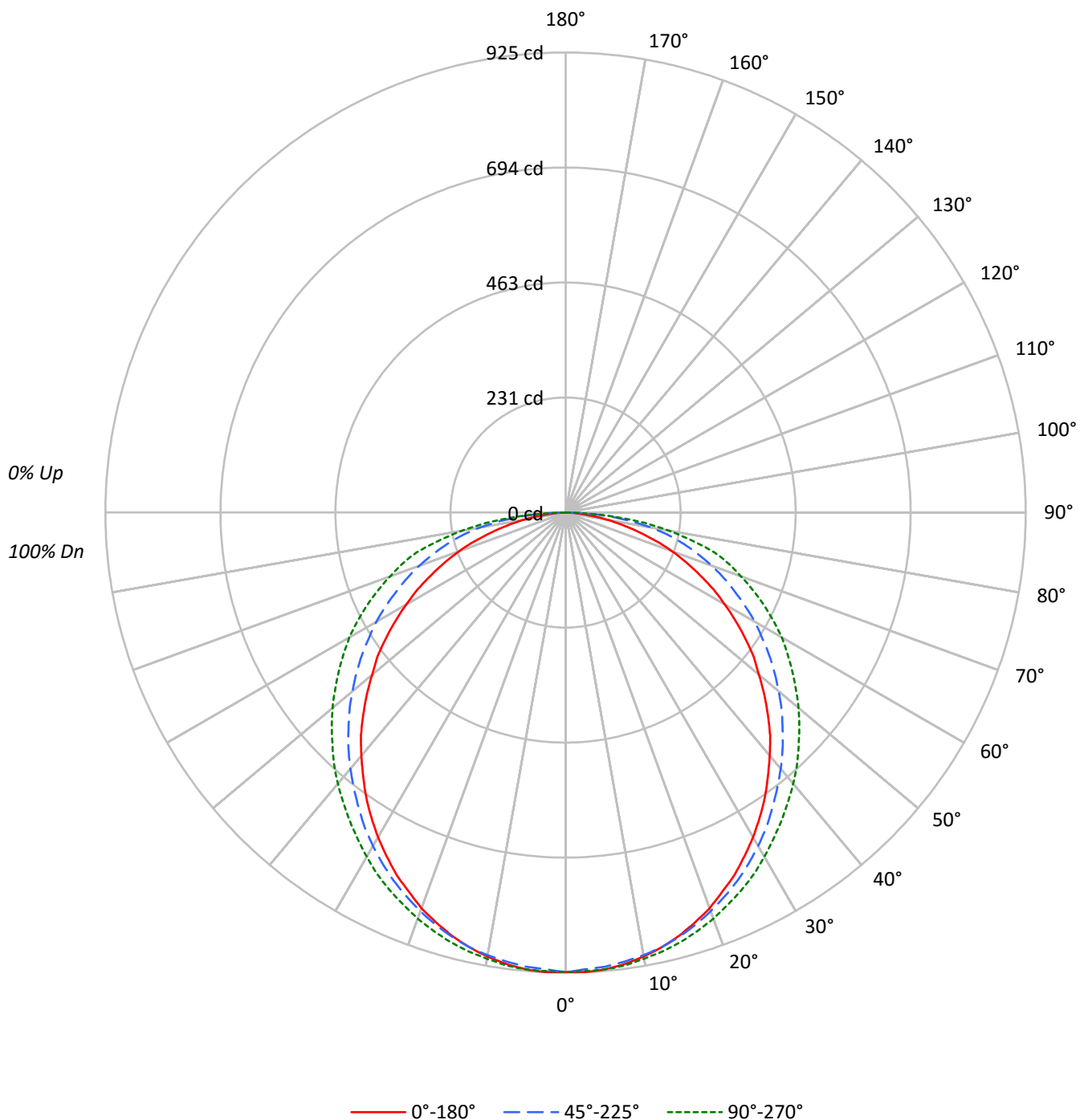
Input Watts (W): 21.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1243	1243	1243
5°	1245	1238	1245
10°	1238	1234	1244
15°	1227	1230	1245
20°	1212	1222	1244
25°	1193	1213	1243
30°	1171	1203	1242
35°	1148	1191	1243
40°	1121	1182	1250
45°	1094	1174	1261
50°	1062	1171	1280
55°	1035	1173	1306
60°	995	1183	1350
65°	950	1195	1400
70°	899	1232	1477
75°	802	1285	1614
80°	684	1361	1649
85°	488	1349	1578



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.4	3.1
10°-20°	250.0	8.9
20°-30°	377.6	13.5
30°-40°	455.0	16.2
40°-50°	477.7	17.1
50°-60°	446.9	16.0
60°-70°	369.1	13.2
70°-80°	251.5	9.0
80°-90°	85.8	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°	715.0	25.5
0°-40°	1170.0	41.8
0°-60°	2094.6	74.8
0°-90°	2801.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2801.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	924	924	924	924	924	
5°	922	921	916	922	922	87
15°	881	882	883	892	894	248
25°	804	808	817	833	837	370
35°	699	706	725	749	756	437
45°	575	587	617	650	663	444
55°	441	459	500	541	557	394
65°	298	323	375	423	440	296
75°	154	190	247	294	310	164
85°	32	62	87	98	102	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	923.7	923.7	923.7	923.7	923.7
2.5°	924.7	923.7	919.1	923.7	922.8
5°	921.9	921.0	916.3	921.9	921.9
7.5°	915.4	915.4	910.7	917.2	918.2
10°	906.1	906.1	903.3	910.7	910.7
12.5°	894.9	894.9	894.9	902.4	903.3
15°	881.0	881.9	882.9	892.1	894.0
17.5°	864.3	866.1	868.9	880.1	881.9
20°	846.6	848.5	853.1	866.1	868.9
22.5°	824.3	829.0	835.5	850.3	853.1
25°	803.9	807.6	816.9	832.7	837.3
27.5°	778.8	784.3	796.4	813.2	819.7
30°	753.7	759.3	774.1	793.6	799.2
32.5°	726.7	735.1	750.9	771.3	777.8
35°	698.8	706.3	724.9	749.0	756.5
37.5°	668.2	678.4	698.8	724.9	734.2
40°	638.4	649.6	672.8	700.7	711.9
42.5°	608.7	619.9	645.9	677.5	688.6
45°	575.2	587.3	617.1	650.5	662.6
47.5°	541.8	556.7	589.2	624.5	637.5
50°	507.4	524.1	559.5	596.6	611.5
52.5°	476.7	492.5	529.7	569.7	583.6
55°	441.4	459.1	500.0	540.9	556.7
57.5°	405.2	424.7	468.4	513.0	528.8
60°	369.9	391.2	439.6	484.2	501.8
62.5°	335.5	356.9	407.0	453.5	471.2
65°	298.3	323.4	375.4	422.8	439.6
67.5°	263.0	289.9	344.8	391.2	408.0
70°	228.6	254.6	313.2	358.7	375.4
72.5°	191.4	221.2	279.7	327.1	344.8
75°	154.3	189.6	247.2	293.7	310.4
77.5°	119.9	156.1	213.7	251.8	260.2
80°	88.3	125.5	175.6	202.6	212.8
82.5°	56.7	93.9	133.8	153.3	161.7
85°	31.6	62.3	87.4	98.5	102.2
87.5°	13.0	27.0	35.3	40.0	40.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)