

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: P313818

Luminaire Tested: **24FCZ2-30-UNV-L83050-CA08-W2A-U-4500K**

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: P313818
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-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 4500K 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: 2939.0 lumens
Efficiency: N/A
Efficacy: 120.0 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

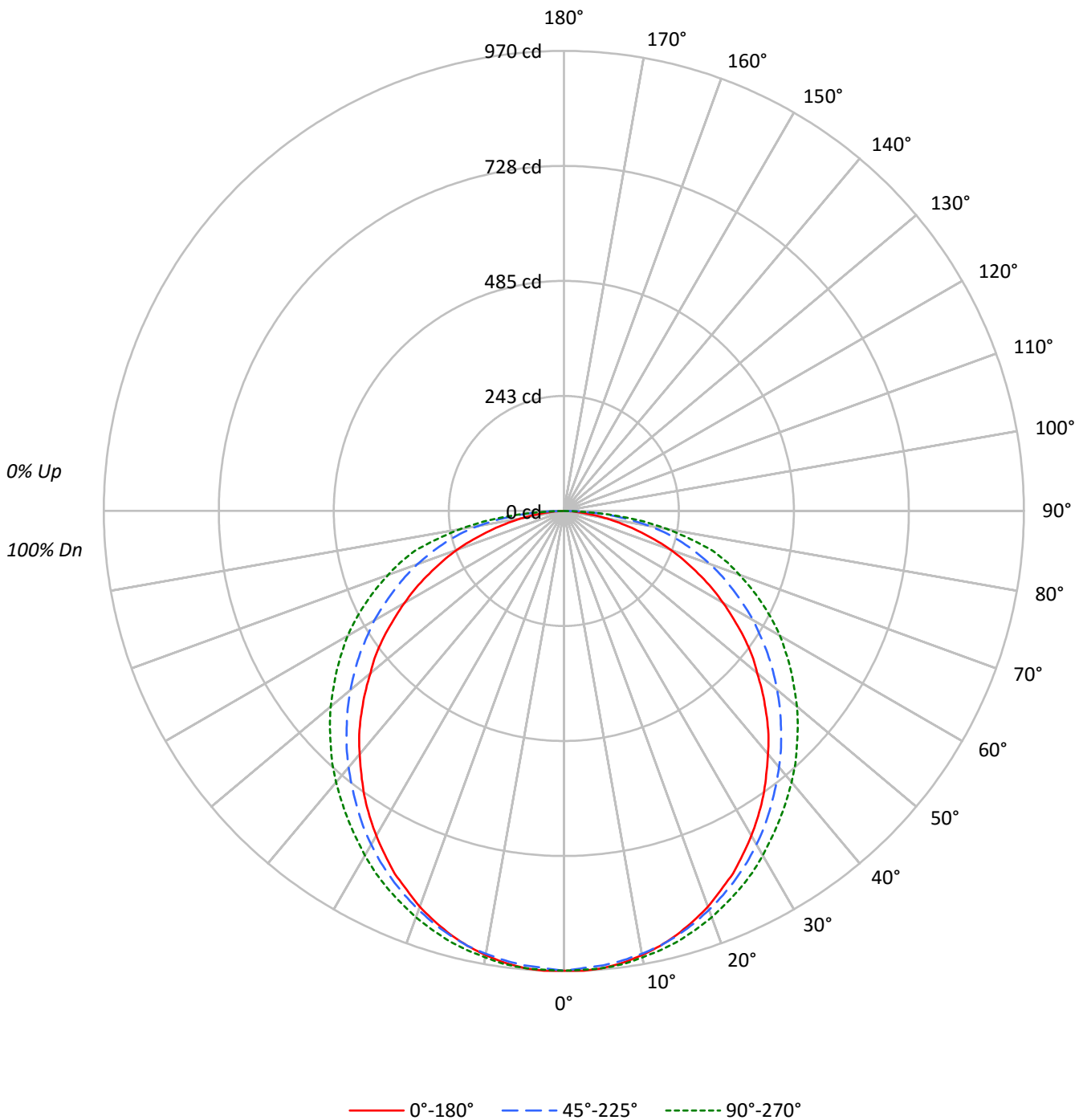
Input Watts (W): 24.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1304	1304	1304
5°	1306	1299	1306
10°	1299	1295	1306
15°	1288	1290	1307
20°	1272	1282	1305
25°	1252	1272	1304
30°	1229	1262	1303
35°	1204	1249	1304
40°	1177	1240	1312
45°	1149	1232	1323
50°	1114	1229	1343
55°	1087	1231	1370
60°	1044	1241	1417
65°	996	1254	1468
70°	944	1293	1550
75°	842	1349	1693
80°	717	1428	1730
85°	513	1416	1656



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.7	3.1
10°-20°	262.3	8.9
20°-30°	396.2	13.5
30°-40°	477.5	16.2
40°-50°	501.3	17.1
50°-60°	468.9	16.0
60°-70°	387.3	13.2
70°-80°	263.9	9.0
80°-90°	90.0	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°	750.2	25.5
0°-40°	1227.6	41.8
0°-60°	2197.8	74.8
0°-90°	2939.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2939.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	969	969	969	969	969	
5°	967	966	962	967	967	92
15°	924	925	926	936	938	261
25°	844	847	857	874	879	388
35°	733	741	761	786	794	458
45°	604	616	648	683	695	466
55°	463	482	525	568	584	413
65°	313	339	394	444	461	310
75°	162	199	259	308	326	173
85°	33	65	92	103	107	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	969.3	969.3	969.3	969.3	969.3
2.5°	970.2	969.3	964.4	969.3	968.3
5°	967.3	966.3	961.5	967.3	967.3
7.5°	960.5	960.5	955.6	962.4	963.4
10°	950.7	950.7	947.8	955.6	955.6
12.5°	939.0	939.0	939.0	946.8	947.8
15°	924.4	925.4	926.4	936.1	938.1
17.5°	906.8	908.8	911.7	923.4	925.4
20°	888.3	890.3	895.1	908.8	911.7
22.5°	864.9	869.8	876.6	892.2	895.1
25°	843.5	847.4	857.1	873.7	878.6
27.5°	817.1	823.0	835.7	853.2	860.0
30°	790.8	796.7	812.3	832.7	838.6
32.5°	762.5	771.3	787.9	809.3	816.2
35°	733.3	741.1	760.6	785.9	793.7
37.5°	701.1	711.8	733.3	760.6	770.3
40°	669.9	681.6	706.0	735.2	746.9
42.5°	638.7	650.4	677.7	710.9	722.6
45°	603.6	616.3	647.5	682.6	695.3
47.5°	568.5	584.1	618.2	655.3	668.9
50°	532.4	550.0	587.0	626.0	641.6
52.5°	500.2	516.8	555.8	597.7	612.4
55°	463.2	481.7	524.6	567.5	584.1
57.5°	425.1	445.6	491.5	538.3	554.8
60°	388.1	410.5	461.2	508.0	526.6
62.5°	352.0	374.4	427.1	475.9	494.4
65°	313.0	339.3	393.9	443.7	461.2
67.5°	276.0	304.2	361.8	410.5	428.1
70°	239.9	267.2	328.6	376.4	393.9
72.5°	200.9	232.1	293.5	343.2	361.8
75°	161.9	198.9	259.4	308.1	325.7
77.5°	125.8	163.8	224.3	264.3	273.0
80°	92.6	131.6	184.3	212.6	223.3
82.5°	59.5	98.5	140.4	160.9	169.7
85°	33.2	65.3	91.7	103.4	107.3
87.5°	13.7	28.3	37.1	41.9	41.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)