

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: P314190

Luminaire Tested: **24FCZ2-30-UNV-L83050-S-CA08-W2A-U-3000K**

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: P314190
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CA08-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 3000K 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: 2753.0 lumens
Efficiency: N/A
Efficacy: 117.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

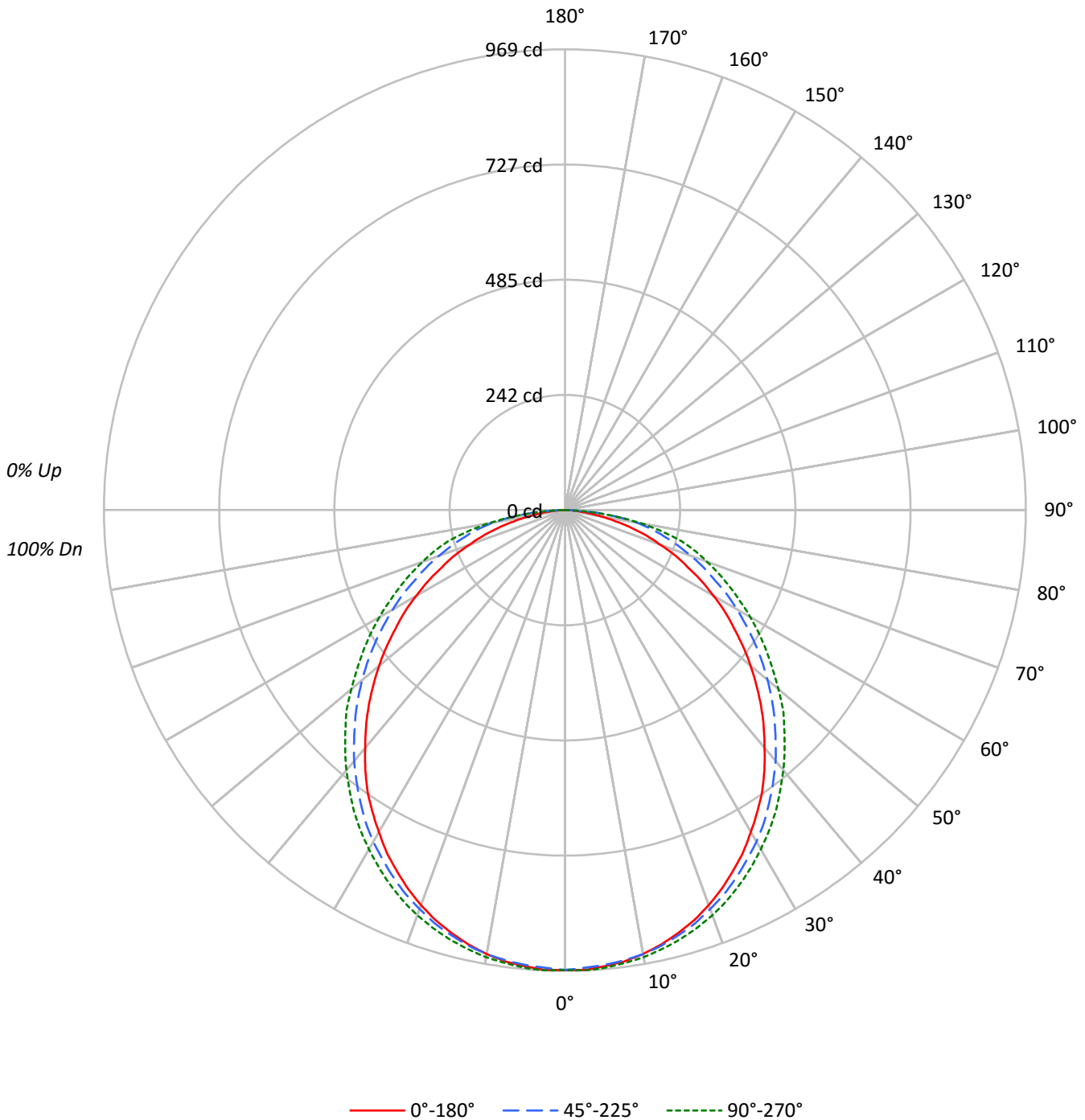
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1301	1301	1301
5°	1300	1297	1305
10°	1295	1295	1305
15°	1283	1289	1302
20°	1266	1278	1298
25°	1242	1266	1290
30°	1215	1251	1280
35°	1188	1231	1270
40°	1147	1210	1255
45°	1110	1186	1241
50°	1067	1164	1226
55°	1019	1143	1214
60°	972	1125	1212
65°	910	1105	1219
70°	843	1111	1252
75°	755	1132	1323
80°	610	1199	1294
85°	459	1053	1027



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.6	3.3
10°-20°	261.6	9.5
20°-30°	393.3	14.3
30°-40°	468.5	17.0
40°-50°	479.4	17.4
50°-60°	431.6	15.7
60°-70°	339.0	12.3
70°-80°	220.0	8.0
80°-90°	68.0	2.5
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°	746.5	27.1
0°-40°	1214.9	44.1
0°-60°	2126.0	77.2
0°-90°	2753.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2753.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	967	967	967	967	967	
5°	963	964	960	965	966	91
15°	921	923	925	933	935	260
25°	837	844	853	867	869	386
35°	723	732	749	768	773	451
45°	583	597	624	647	652	450
55°	435	454	487	512	518	390
65°	286	308	347	376	383	285
75°	145	173	218	248	254	154
85°	30	55	68	66	66	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	967.1	967.1	967.1	967.1	967.1
2.5°	968.0	968.0	963.6	968.0	968.9
5°	962.8	964.5	960.2	965.4	966.3
7.5°	957.5	957.5	954.9	960.2	961.0
10°	947.9	948.8	947.9	954.0	954.9
12.5°	935.7	937.4	938.3	944.4	945.3
15°	920.8	923.4	925.2	933.0	934.8
17.5°	904.2	906.8	911.2	919.9	921.7
20°	884.1	887.6	892.8	904.2	906.8
22.5°	862.2	865.7	874.5	884.9	889.3
25°	836.9	843.8	852.6	866.6	869.2
27.5°	811.5	817.6	829.0	843.8	847.3
30°	781.8	791.4	805.4	820.2	823.7
32.5°	752.9	762.5	779.1	794.9	799.3
35°	723.2	731.9	749.4	767.8	773.0
37.5°	689.1	700.4	719.7	738.0	743.3
40°	653.2	667.2	689.1	708.3	714.4
42.5°	619.1	634.0	655.8	676.8	683.8
45°	583.3	597.3	623.5	647.1	652.3
47.5°	546.5	562.3	590.3	613.9	622.6
50°	509.8	526.4	556.2	580.6	585.9
52.5°	473.1	490.6	522.0	548.3	550.9
55°	434.6	453.8	487.1	512.4	517.7
57.5°	399.6	416.2	452.1	478.3	484.4
60°	361.1	379.5	418.0	442.5	450.3
62.5°	324.4	343.7	383.9	408.4	415.4
65°	285.9	307.8	347.2	376.0	383.0
67.5°	252.7	273.7	315.7	343.7	350.7
70°	214.2	237.9	282.4	311.3	318.3
72.5°	181.0	205.5	250.1	278.1	288.6
75°	145.2	173.1	217.7	247.5	254.5
77.5°	110.2	142.5	188.0	210.7	210.7
80°	78.7	112.8	154.8	165.3	167.0
82.5°	51.6	84.8	114.6	113.7	113.7
85°	29.7	55.1	68.2	66.5	66.5
87.5°	11.4	22.7	24.5	24.5	23.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)