

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: P312617

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-RDP-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: P312617
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-24HE-UNV-L83050-RDP-CA08-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 1543.0 lumens
Efficiency: N/A
Efficacy: 79.9 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

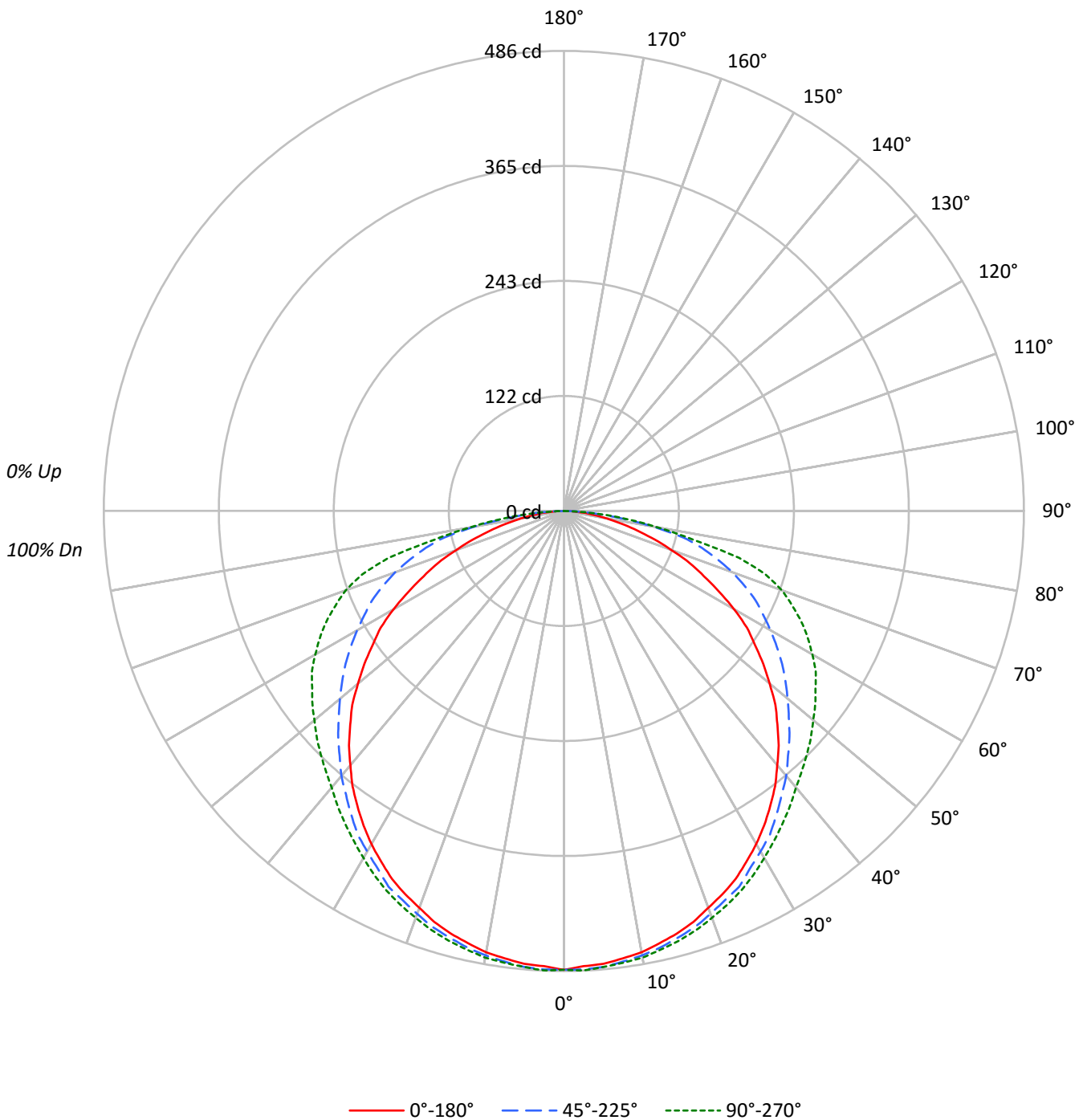
Input Watts (W): 19.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1304	1304	1304
5°	1297	1306	1306
10°	1293	1303	1309
15°	1287	1300	1309
20°	1277	1297	1310
25°	1274	1301	1314
30°	1263	1291	1316
35°	1249	1286	1324
40°	1232	1284	1340
45°	1214	1283	1382
50°	1188	1292	1440
55°	1156	1321	1523
60°	1118	1356	1631
65°	1041	1424	1764
70°	956	1492	1929
75°	838	1570	1994
80°	721	1495	1565
85°	630	1087	1192



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.8	3.0
10°-20°	131.6	8.5
20°-30°	200.8	13.0
30°-40°	245.2	15.9
40°-50°	262.2	17.0
50°-60°	253.1	16.4
60°-70°	217.9	14.1
70°-80°	147.4	9.6
80°-90°	38.9	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°	378.3	24.5
0°-40°	623.6	40.4
0°-60°	1138.8	73.8
0°-90°	1543.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1543.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	485	485	485	485	485	
5°	480	481	484	484	484	46
15°	462	463	466	469	470	130
25°	429	431	438	440	443	197
35°	380	384	392	400	403	238
45°	319	325	337	354	363	246
55°	246	254	282	310	325	221
65°	164	179	224	259	277	163
75°	81	107	151	182	192	86
85°	20	28	35	36	39	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	484.7	484.7	484.7	484.7	484.7
2.5°	481.3	482.4	484.7	484.7	485.8
5°	480.1	481.3	483.5	483.5	483.5
7.5°	476.7	477.9	480.1	481.3	481.3
10°	473.3	474.5	476.7	477.9	479.0
12.5°	467.7	468.8	472.2	474.5	474.5
15°	462.0	463.1	466.5	468.8	469.9
17.5°	455.2	457.4	460.8	463.1	464.3
20°	446.1	448.4	452.9	456.3	457.4
22.5°	438.1	440.4	445.0	448.4	450.6
25°	429.1	431.3	438.1	440.4	442.7
27.5°	417.7	420.0	425.7	430.2	433.6
30°	406.4	408.6	415.4	421.1	423.4
32.5°	393.9	397.3	405.2	409.8	413.2
35°	380.3	383.7	391.6	399.6	403.0
37.5°	366.6	370.0	378.0	388.2	392.7
40°	350.7	355.3	365.5	379.1	381.4
42.5°	336.0	341.7	350.7	366.6	372.3
45°	319.0	324.6	337.1	354.1	363.2
47.5°	303.1	308.7	322.4	342.8	354.1
50°	283.8	291.7	308.7	332.6	343.9
52.5°	265.6	272.4	295.1	321.2	334.9
55°	246.3	254.3	281.5	309.9	324.6
57.5°	229.3	236.1	266.7	298.5	315.6
60°	207.7	216.8	252.0	286.0	303.1
62.5°	185.0	198.6	237.2	272.4	290.6
65°	163.5	179.3	223.6	258.8	277.0
67.5°	144.2	161.2	206.6	244.0	261.1
70°	121.5	143.0	189.6	225.9	245.2
72.5°	101.0	124.9	170.3	206.6	223.6
75°	80.6	106.7	151.0	181.6	191.8
77.5°	62.4	87.4	129.4	138.5	139.6
80°	46.5	69.2	96.5	97.6	101.0
82.5°	31.8	48.8	62.4	68.1	69.2
85°	20.4	28.4	35.2	36.3	38.6
87.5°	9.1	10.2	12.5	11.4	11.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)