

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: P308105

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-HRP-CA08-W2A-U-2700K**

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: P308105
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
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-L82765-HRP-CA08-W2A-U-2700K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 1565.0 lumens
Efficiency: N/A
Efficacy: 82.8 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

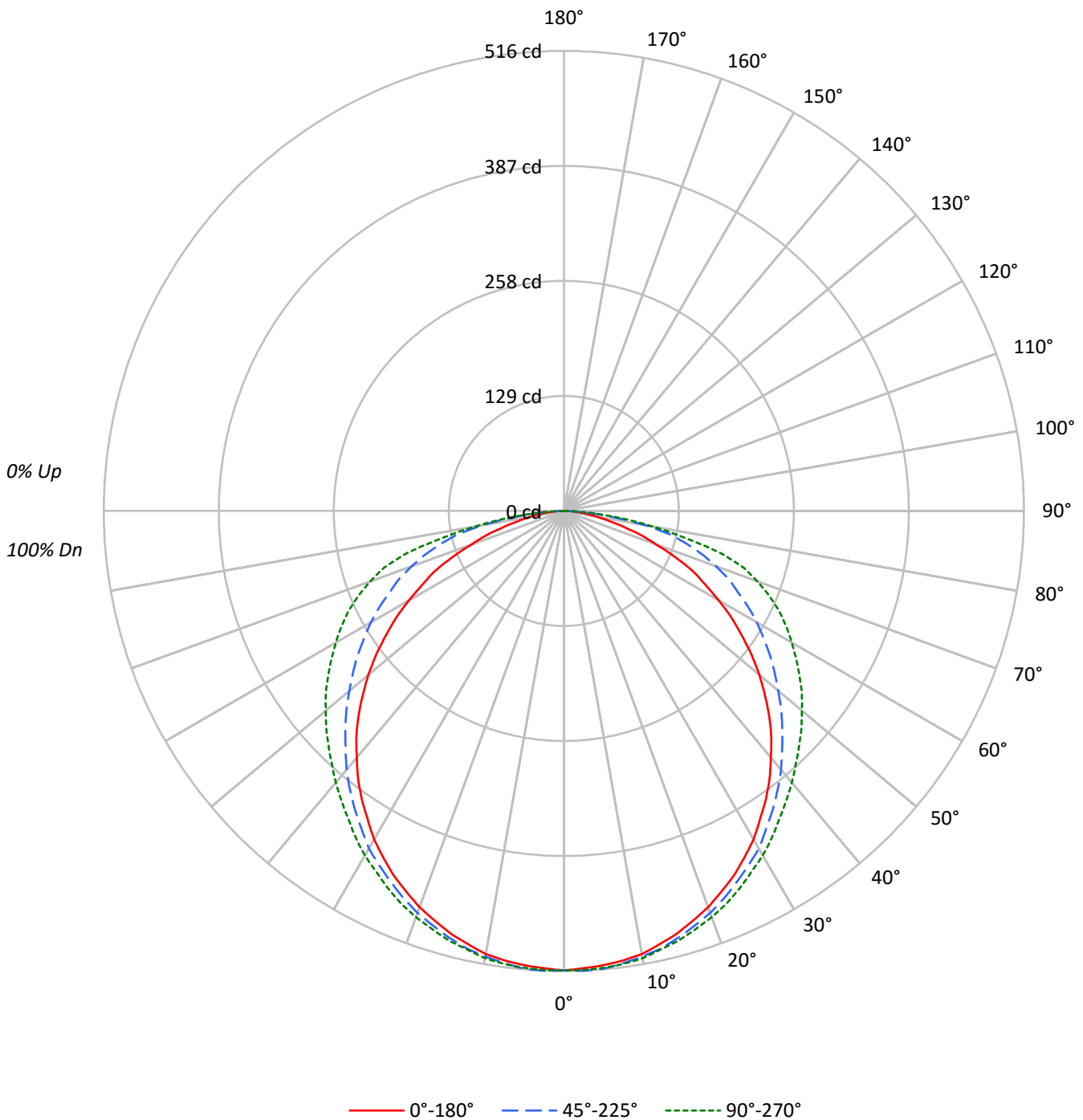
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	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°	1387	1387	1387
5°	1381	1392	1389
10°	1379	1386	1392
15°	1367	1381	1389
20°	1354	1374	1388
25°	1340	1363	1387
30°	1322	1359	1386
35°	1297	1343	1385
40°	1269	1332	1398
45°	1240	1319	1420
50°	1199	1314	1459
55°	1144	1324	1514
60°	1079	1344	1589
65°	1018	1370	1698
70°	870	1430	1817
75°	729	1488	1889
80°	597	1438	1576
85°	519	1068	1158



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.8	3.1
10°-20°	139.7	8.9
20°-30°	211.7	13.5
30°-40°	255.7	16.3
40°-50°	268.6	17.2
50°-60°	252.8	16.2
60°-70°	210.8	13.5
70°-80°	139.6	8.9
80°-90°	37.2	2.4
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°	400.3	25.6
0°-40°	656.0	41.9
0°-60°	1177.4	75.2
0°-90°	1565.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1565.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	515	515	515	515	515	
5°	511	512	515	515	514	49
15°	491	493	496	498	499	138
25°	451	454	459	465	467	208
35°	395	399	409	418	422	247
45°	326	331	346	364	373	251
55°	244	255	282	311	323	218
65°	160	174	215	251	267	156
75°	70	98	143	173	182	76
85°	17	26	35	38	38	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	515.3	515.3	515.3	515.3	515.3
2.5°	513.4	514.3	516.3	516.3	515.3
5°	511.4	512.4	515.3	515.3	514.3
7.5°	508.4	509.4	511.4	513.4	512.4
10°	504.5	505.5	507.4	509.4	509.4
12.5°	497.6	498.6	502.5	503.5	503.5
15°	490.7	492.6	495.6	497.6	498.6
17.5°	481.8	483.7	487.7	491.6	491.6
20°	472.9	474.9	479.8	483.7	484.7
22.5°	462.0	465.0	469.9	474.9	476.8
25°	451.2	454.1	459.1	465.0	467.0
27.5°	438.3	441.3	448.2	455.1	456.1
30°	425.5	428.5	437.3	443.3	446.2
32.5°	409.7	413.7	422.5	431.4	434.4
35°	394.9	398.8	408.7	417.6	421.5
37.5°	379.1	383.0	393.9	404.8	409.7
40°	361.3	366.3	379.1	390.9	397.9
42.5°	344.5	349.5	362.3	378.1	385.0
45°	325.8	330.7	346.5	364.3	373.2
47.5°	306.0	312.0	330.7	352.4	361.3
50°	286.3	293.2	313.9	338.6	348.5
52.5°	265.6	274.5	298.1	324.8	336.6
55°	243.8	254.7	282.3	311.0	322.8
57.5°	223.1	233.0	265.6	296.2	309.0
60°	200.4	213.2	249.8	281.4	295.2
62.5°	178.7	192.5	233.0	266.6	281.4
65°	159.9	173.8	215.2	250.8	266.6
67.5°	135.3	154.0	200.4	234.0	249.8
70°	110.6	136.2	181.7	216.2	231.0
72.5°	91.8	116.5	162.9	197.4	211.3
75°	70.1	97.7	143.1	172.8	181.7
77.5°	52.3	81.0	122.4	137.2	138.2
80°	38.5	62.2	92.8	97.7	101.7
82.5°	26.7	43.4	60.2	66.1	68.1
85°	16.8	25.7	34.6	37.5	37.5
87.5°	8.9	9.9	11.8	11.8	11.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)