

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: P308106

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-HRP-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: P308106
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-3000K
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: 1610.0 lumens
Efficiency: N/A
Efficacy: 85.6 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

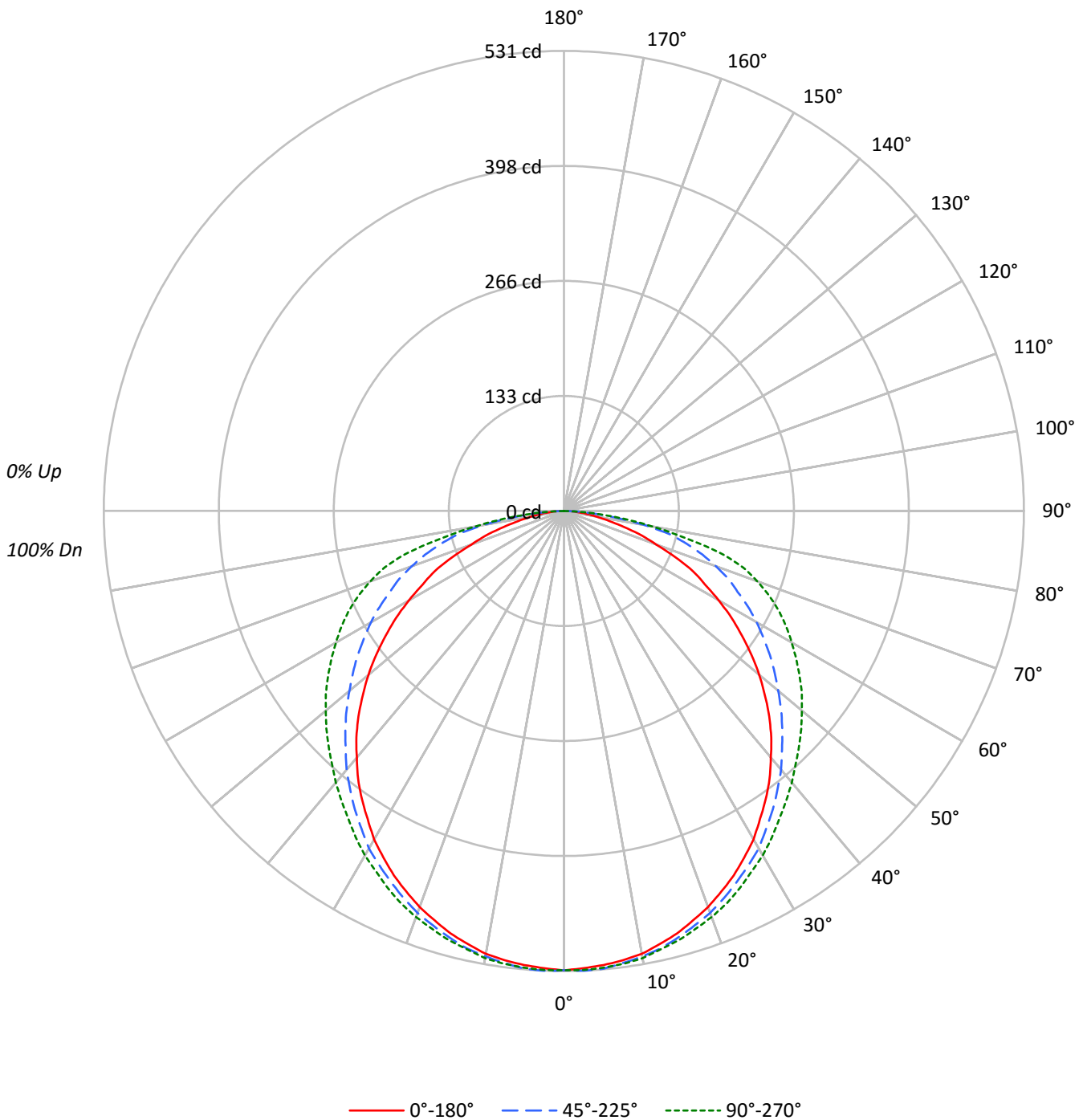
Input Watts (W): 18.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1427	1427	1427
5°	1421	1432	1429
10°	1418	1426	1432
15°	1406	1420	1429
20°	1393	1414	1428
25°	1378	1402	1426
30°	1360	1398	1427
35°	1334	1381	1425
40°	1306	1370	1438
45°	1276	1357	1461
50°	1233	1352	1501
55°	1177	1363	1558
60°	1110	1383	1635
65°	1047	1410	1746
70°	895	1471	1870
75°	750	1531	1943
80°	614	1480	1621
85°	534	1096	1192



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.2	3.1
10°-20°	143.7	8.9
20°-30°	217.8	13.5
30°-40°	263.0	16.3
40°-50°	276.4	17.2
50°-60°	260.0	16.2
60°-70°	216.8	13.5
70°-80°	143.7	8.9
80°-90°	38.3	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°	411.8	25.6
0°-40°	674.8	41.9
0°-60°	1211.2	75.2
0°-90°	1610.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1610.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	530	530	530	530	530	
5°	526	527	530	530	529	50
15°	505	507	510	512	513	142
25°	464	467	472	478	480	214
35°	406	410	420	430	434	254
45°	335	340	356	375	384	258
55°	251	262	290	320	332	224
65°	164	179	221	258	274	160
75°	72	100	147	178	187	78
85°	17	26	36	39	39	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	530.2	530.2	530.2	530.2	530.2
2.5°	528.1	529.1	531.2	531.2	530.2
5°	526.1	527.1	530.2	530.2	529.1
7.5°	523.0	524.1	526.1	528.1	527.1
10°	519.0	520.0	522.0	524.1	524.1
12.5°	511.9	512.9	517.0	518.0	518.0
15°	504.8	506.8	509.8	511.9	512.9
17.5°	495.6	497.7	501.7	505.8	505.8
20°	486.5	488.5	493.6	497.7	498.7
22.5°	475.3	478.4	483.4	488.5	490.5
25°	464.1	467.2	472.3	478.4	480.4
27.5°	450.9	454.0	461.1	468.2	469.2
30°	437.7	440.8	449.9	456.0	459.1
32.5°	421.5	425.5	434.7	443.8	446.9
35°	406.2	410.3	420.5	429.6	433.7
37.5°	390.0	394.1	405.2	416.4	421.5
40°	371.7	376.8	390.0	402.2	409.3
42.5°	354.5	359.5	372.7	389.0	396.1
45°	335.2	340.2	356.5	374.8	383.9
47.5°	314.8	320.9	340.2	362.6	371.7
50°	294.5	301.6	323.0	348.4	358.5
52.5°	273.2	282.3	306.7	334.1	346.3
55°	250.9	262.0	290.5	319.9	332.1
57.5°	229.5	239.7	273.2	304.7	317.9
60°	206.2	219.4	257.0	289.5	303.7
62.5°	183.8	198.0	239.7	274.2	289.5
65°	164.5	178.7	221.4	258.0	274.2
67.5°	139.1	158.4	206.2	240.7	257.0
70°	113.7	140.2	186.9	222.4	237.7
72.5°	94.5	119.8	167.6	203.1	217.3
75°	72.1	100.5	147.3	177.7	186.9
77.5°	53.8	83.3	125.9	141.2	142.2
80°	39.6	64.0	95.5	100.5	104.6
82.5°	27.4	44.7	62.0	68.0	70.1
85°	17.3	26.4	35.5	38.6	38.6
87.5°	9.1	10.2	12.2	12.2	12.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)