

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: P308135

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-HRP-CP187-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: P308135
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-CP187-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB 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: 1593.0 lumens
Efficiency: N/A
Efficacy: 83.4 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

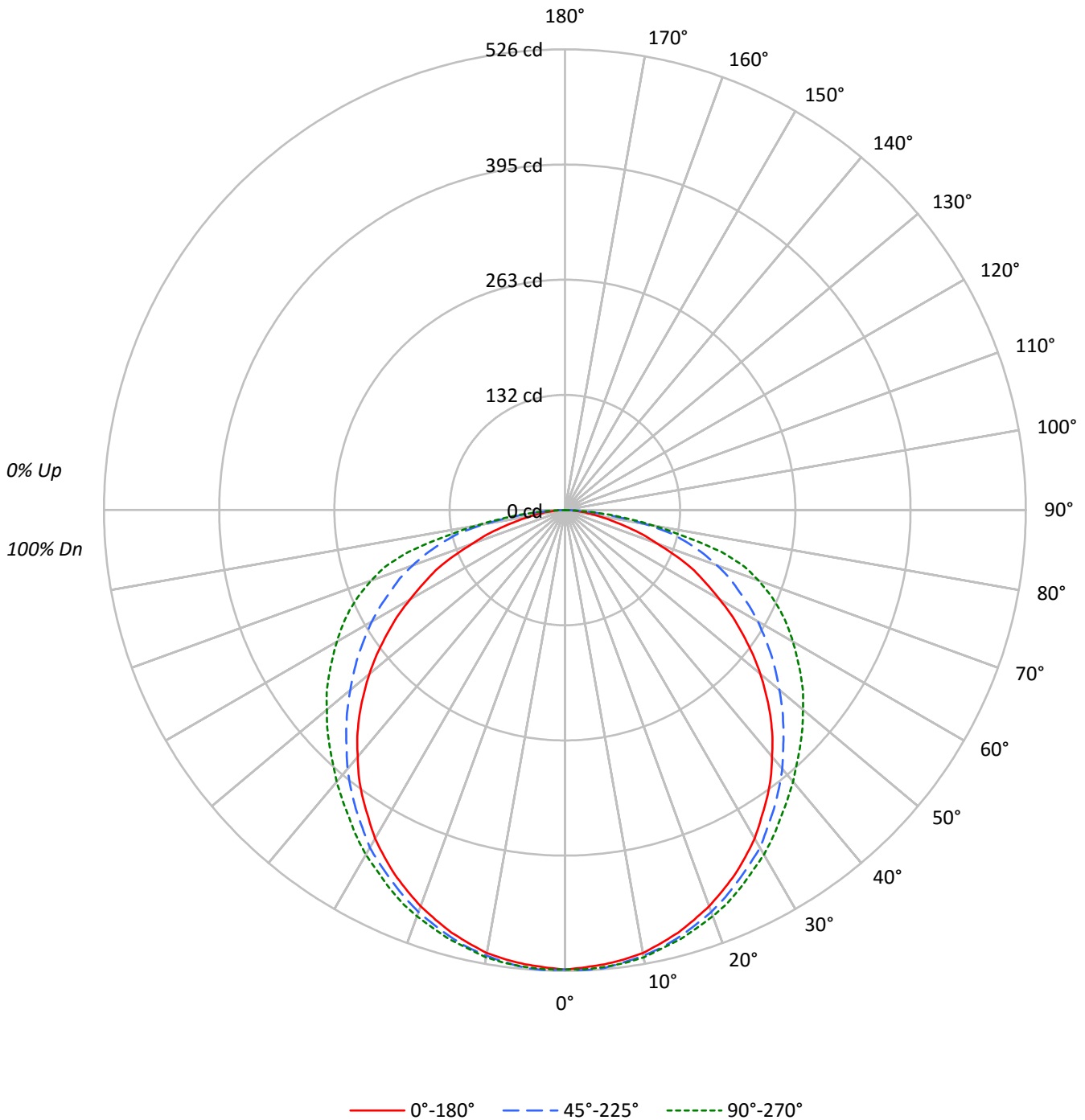
Input Watts (W): 19.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1412	1412	1412
5°	1406	1417	1414
10°	1403	1411	1417
15°	1391	1405	1414
20°	1378	1399	1413
25°	1363	1387	1411
30°	1346	1383	1411
35°	1321	1367	1410
40°	1292	1356	1423
45°	1262	1342	1446
50°	1220	1338	1485
55°	1164	1348	1542
60°	1098	1368	1617
65°	1037	1395	1727
70°	885	1455	1850
75°	741	1515	1922
80°	607	1464	1604
85°	528	1087	1179



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.7	3.1
10°-20°	142.2	8.9
20°-30°	215.5	13.5
30°-40°	260.2	16.3
40°-50°	273.4	17.2
50°-60°	257.3	16.2
60°-70°	214.5	13.5
70°-80°	142.2	8.9
80°-90°	37.9	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°	407.5	25.6
0°-40°	667.7	41.9
0°-60°	1198.4	75.2
0°-90°	1593.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1593.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	525	525	525	525	525	
5°	520	522	525	525	524	49
15°	499	501	504	506	508	141
25°	459	462	467	473	475	211
35°	402	406	416	425	429	251
45°	332	337	353	371	380	255
55°	248	259	287	316	329	222
65°	163	177	219	255	271	158
75°	71	100	146	176	185	77
85°	17	26	35	38	38	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	524.6	524.6	524.6	524.6	524.6
2.5°	522.5	523.6	525.6	525.6	524.6
5°	520.5	521.5	524.6	524.6	523.6
7.5°	517.5	518.5	520.5	522.5	521.5
10°	513.5	514.5	516.5	518.5	518.5
12.5°	506.5	507.5	511.5	512.5	512.5
15°	499.4	501.4	504.5	506.5	507.5
17.5°	490.4	492.4	496.4	500.4	500.4
20°	481.3	483.4	488.4	492.4	493.4
22.5°	470.3	473.3	478.3	483.4	485.4
25°	459.2	462.3	467.3	473.3	475.3
27.5°	446.2	449.2	456.2	463.3	464.3
30°	433.1	436.1	445.2	451.2	454.2
32.5°	417.0	421.1	430.1	439.1	442.2
35°	402.0	406.0	416.0	425.1	429.1
37.5°	385.9	389.9	401.0	412.0	417.0
40°	367.8	372.8	385.9	397.9	405.0
42.5°	350.7	355.7	368.8	384.9	391.9
45°	331.6	336.6	352.7	370.8	379.9
47.5°	311.5	317.5	336.6	358.7	367.8
50°	291.4	298.5	319.6	344.7	354.7
52.5°	270.3	279.4	303.5	330.6	342.7
55°	248.2	259.3	287.4	316.5	328.6
57.5°	227.1	237.2	270.3	301.5	314.5
60°	204.0	217.1	254.2	286.4	300.5
62.5°	181.9	196.0	237.2	271.3	286.4
65°	162.8	176.9	219.1	255.2	271.3
67.5°	137.7	156.8	204.0	238.2	254.2
70°	112.5	138.7	184.9	220.1	235.1
72.5°	93.5	118.6	165.8	201.0	215.0
75°	71.3	99.5	145.7	175.9	184.9
77.5°	53.3	82.4	124.6	139.7	140.7
80°	39.2	63.3	94.5	99.5	103.5
82.5°	27.1	44.2	61.3	67.3	69.3
85°	17.1	26.1	35.2	38.2	38.2
87.5°	9.0	10.0	12.1	12.1	12.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)