

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: P308110

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-HRP-CA08-W2A-U-5000K**

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: P308110
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-5000K
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: 1756.0 lumens
Efficiency: N/A
Efficacy: 91.0 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

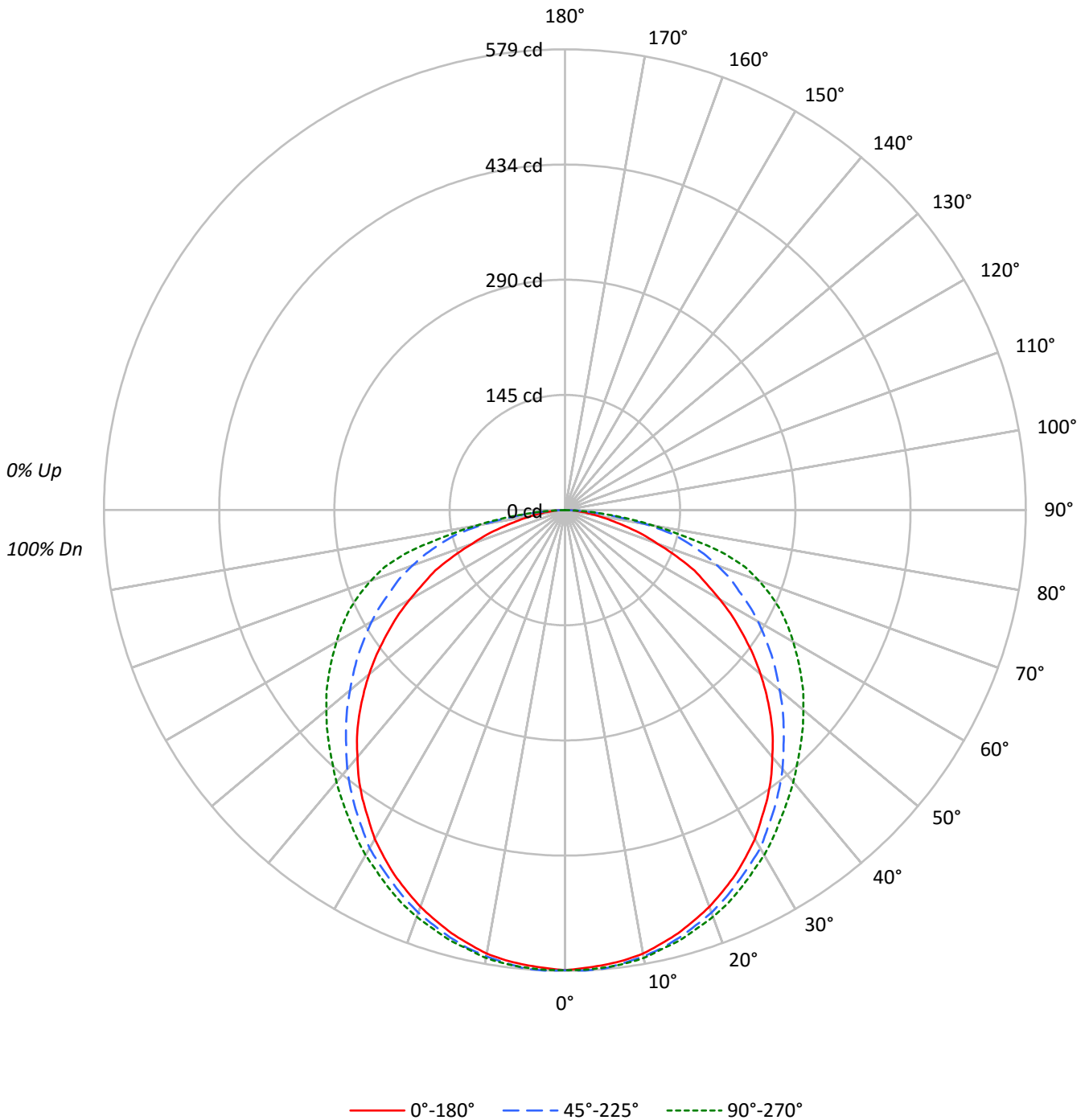
Input Watts (W): 19.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1556	1556	1556
5°	1550	1562	1559
10°	1547	1556	1562
15°	1534	1549	1558
20°	1519	1542	1558
25°	1503	1529	1556
30°	1483	1525	1556
35°	1456	1507	1554
40°	1424	1494	1568
45°	1391	1480	1593
50°	1345	1475	1637
55°	1284	1486	1699
60°	1210	1509	1783
65°	1143	1538	1904
70°	976	1603	2039
75°	817	1670	2119
80°	669	1613	1768
85°	580	1198	1300



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.8	3.1
10°-20°	156.8	8.9
20°-30°	237.6	13.5
30°-40°	286.9	16.3
40°-50°	301.4	17.2
50°-60°	283.6	16.2
60°-70°	236.5	13.5
70°-80°	156.7	8.9
80°-90°	41.8	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°	449.1	25.6
0°-40°	736.0	41.9
0°-60°	1321.1	75.2
0°-90°	1756.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1756.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	578	578	578	578	578	
5°	574	575	578	578	577	55
15°	550	553	556	558	559	155
25°	506	510	515	522	524	233
35°	443	448	459	469	473	277
45°	366	371	389	409	419	282
55°	274	286	317	349	362	245
65°	180	195	242	281	299	175
75°	79	110	161	194	204	85
85°	19	29	39	42	42	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	578.2	578.2	578.2	578.2	578.2
2.5°	576.0	577.1	579.3	579.3	578.2
5°	573.8	574.9	578.2	578.2	577.1
7.5°	570.5	571.6	573.8	576.0	574.9
10°	566.0	567.2	569.4	571.6	571.6
12.5°	558.3	559.4	563.8	564.9	564.9
15°	550.5	552.8	556.1	558.3	559.4
17.5°	540.6	542.8	547.2	551.6	551.6
20°	530.6	532.8	538.4	542.8	543.9
22.5°	518.4	521.7	527.3	532.8	535.0
25°	506.2	509.6	515.1	521.7	524.0
27.5°	491.8	495.2	502.9	510.7	511.8
30°	477.4	480.8	490.7	497.4	500.7
32.5°	459.7	464.1	474.1	484.1	487.4
35°	443.1	447.5	458.6	468.6	473.0
37.5°	425.4	429.8	442.0	454.2	459.7
40°	405.4	411.0	425.4	438.7	446.4
42.5°	386.6	392.1	406.5	424.3	432.0
45°	365.5	371.1	388.8	408.7	418.7
47.5°	343.4	350.0	371.1	395.5	405.4
50°	321.2	329.0	352.3	379.9	391.0
52.5°	298.0	307.9	334.5	364.4	377.7
55°	273.6	285.8	316.8	348.9	362.2
57.5°	250.3	261.4	298.0	332.3	346.7
60°	224.9	239.3	280.3	315.7	331.2
62.5°	200.5	216.0	261.4	299.1	315.7
65°	179.5	195.0	241.5	281.4	299.1
67.5°	151.8	172.8	224.9	262.5	280.3
70°	124.1	152.9	203.8	242.6	259.2
72.5°	103.0	130.7	182.8	221.5	237.1
75°	78.6	109.7	160.6	193.9	203.8
77.5°	58.7	90.8	137.4	154.0	155.1
80°	43.2	69.8	104.1	109.7	114.1
82.5°	29.9	48.7	67.6	74.2	76.4
85°	18.8	28.8	38.8	42.1	42.1
87.5°	10.0	11.1	13.3	13.3	13.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)