

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: P312442

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-HRP-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: P312442
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: 22FCZ2-20HE-UNV-L83050-HRP-CA08-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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: 1645.0 lumens
Efficiency: N/A
Efficacy: 96.2 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

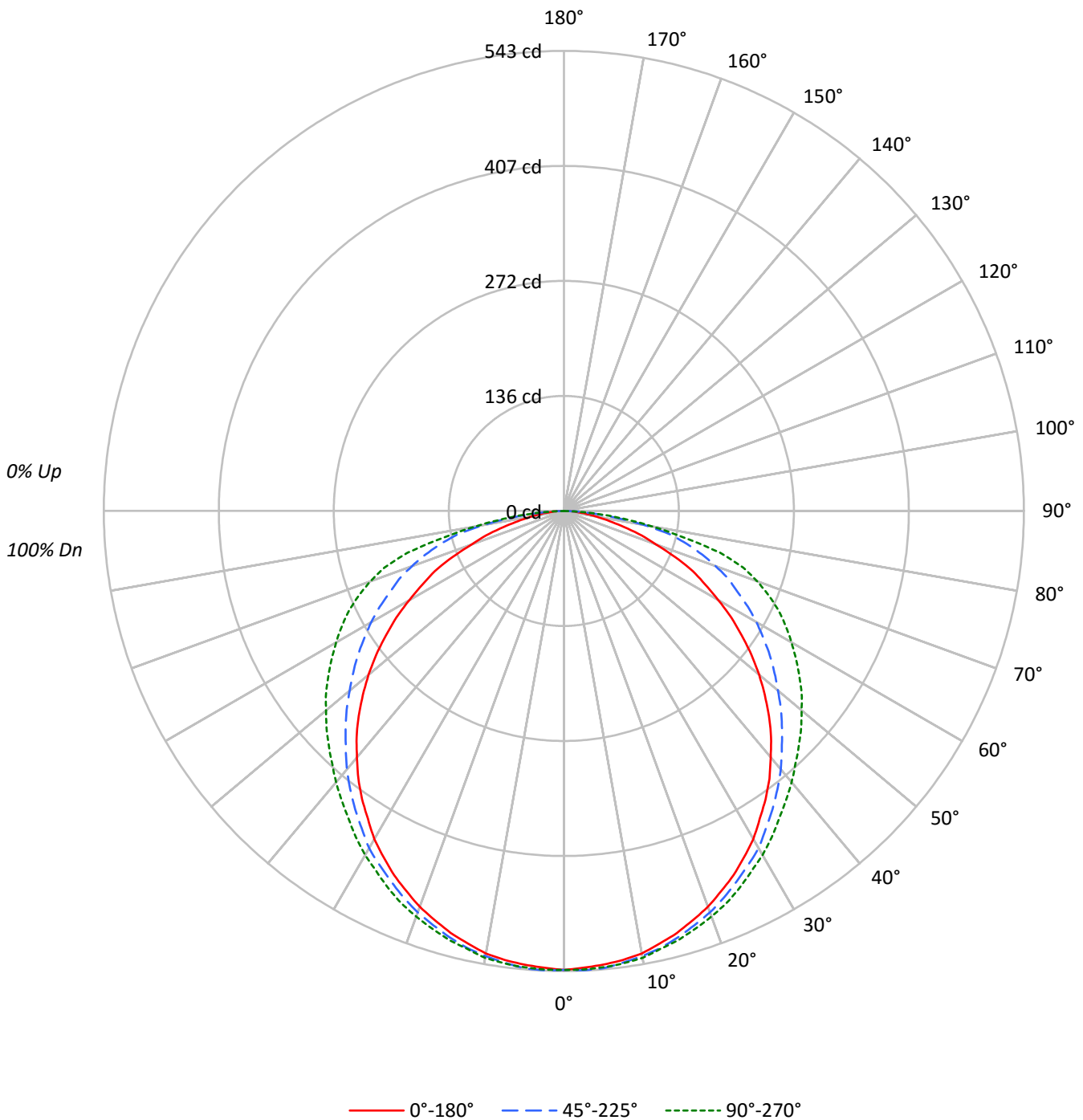
Input Watts (W): 17.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1458	1458	1458
5°	1452	1463	1460
10°	1449	1458	1463
15°	1437	1451	1460
20°	1424	1444	1459
25°	1408	1433	1457
30°	1390	1428	1457
35°	1364	1411	1456
40°	1334	1400	1469
45°	1303	1386	1493
50°	1260	1382	1533
55°	1202	1392	1592
60°	1134	1413	1670
65°	1070	1440	1784
70°	914	1502	1910
75°	766	1565	1985
80°	628	1511	1657
85°	543	1121	1216



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.3	3.1
10°-20°	146.9	8.9
20°-30°	222.6	13.5
30°-40°	268.7	16.3
40°-50°	282.4	17.2
50°-60°	265.7	16.2
60°-70°	221.5	13.5
70°-80°	146.8	8.9
80°-90°	39.1	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°	420.7	25.6
0°-40°	689.5	41.9
0°-60°	1237.5	75.2
0°-90°	1645.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1645.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	542	542	542	542	542	
5°	538	539	542	542	541	51
15°	516	518	521	523	524	145
25°	474	477	482	489	491	218
35°	415	419	430	439	443	260
45°	342	348	364	383	392	264
55°	256	268	297	327	339	229
65°	168	183	226	264	280	164
75°	74	103	150	182	191	80
85°	18	27	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°	541.7	541.7	541.7	541.7	541.7
2.5°	539.6	540.6	542.7	542.7	541.7
5°	537.5	538.6	541.7	541.7	540.6
7.5°	534.4	535.5	537.5	539.6	538.6
10°	530.3	531.3	533.4	535.5	535.5
12.5°	523.0	524.0	528.2	529.2	529.2
15°	515.7	517.8	520.9	523.0	524.0
17.5°	506.4	508.5	512.6	516.8	516.8
20°	497.1	499.1	504.3	508.5	509.5
22.5°	485.6	488.8	493.9	499.1	501.2
25°	474.2	477.3	482.5	488.8	490.8
27.5°	460.7	463.9	471.1	478.4	479.4
30°	447.2	450.4	459.7	465.9	469.0
32.5°	430.6	434.8	444.1	453.5	456.6
35°	415.1	419.2	429.6	438.9	443.1
37.5°	398.5	402.6	414.0	425.5	430.6
40°	379.8	385.0	398.5	410.9	418.2
42.5°	362.2	367.3	380.8	397.4	404.7
45°	342.4	347.6	364.2	382.9	392.3
47.5°	321.7	327.9	347.6	370.5	379.8
50°	300.9	308.2	330.0	355.9	366.3
52.5°	279.1	288.5	313.4	341.4	353.9
55°	256.3	267.7	296.8	326.9	339.3
57.5°	234.5	244.9	279.1	311.3	324.8
60°	210.7	224.1	262.5	295.7	310.3
62.5°	187.8	202.4	244.9	280.2	295.7
65°	168.1	182.6	226.2	263.6	280.2
67.5°	142.2	161.9	210.7	245.9	262.5
70°	116.2	143.2	190.9	227.3	242.8
72.5°	96.5	122.4	171.2	207.5	222.1
75°	73.7	102.7	150.5	181.6	190.9
77.5°	55.0	85.1	128.7	144.2	145.3
80°	40.5	65.4	97.5	102.7	106.9
82.5°	28.0	45.7	63.3	69.5	71.6
85°	17.6	27.0	36.3	39.4	39.4
87.5°	9.3	10.4	12.5	12.5	12.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)