

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: P312740

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-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: P312740
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
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-CA08-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 1839.0 lumens
Efficiency: N/A
Efficacy: 110.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

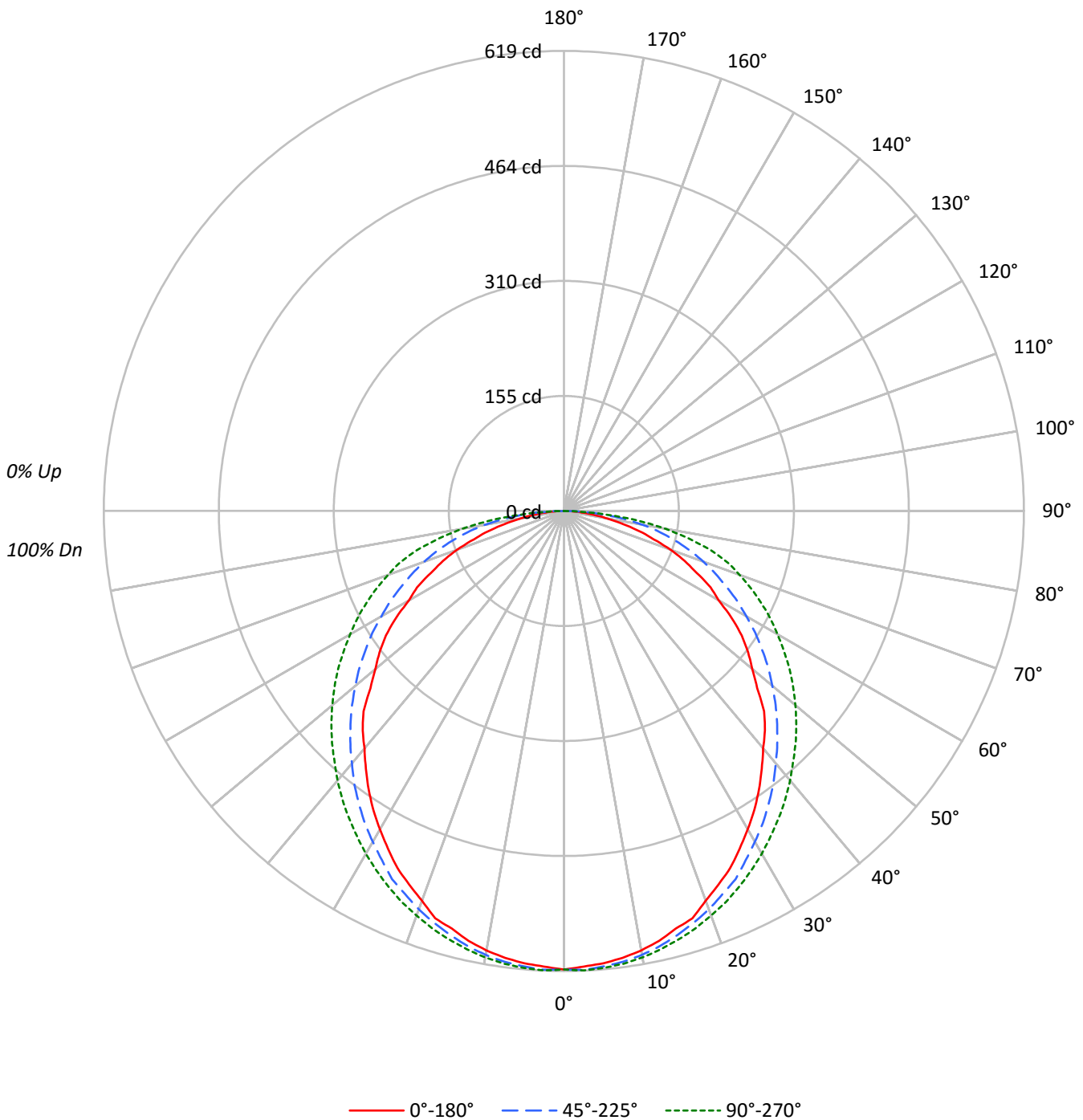
Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	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	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
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	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1660	1660	1660
5°	1650	1662	1667
10°	1640	1657	1667
15°	1621	1645	1663
20°	1598	1633	1659
25°	1573	1623	1657
30°	1537	1597	1655
35°	1504	1579	1657
40°	1466	1558	1663
45°	1450	1544	1678
50°	1385	1533	1702
55°	1371	1528	1739
60°	1293	1525	1786
65°	1256	1536	1866
70°	1205	1572	1980
75°	1098	1620	2132
80°	941	1678	2156
85°	760	1602	1849



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.4	3.2
10°-20°	166.6	9.1
20°-30°	250.7	13.6
30°-40°	300.9	16.4
40°-50°	314.4	17.1
50°-60°	293.0	15.9
60°-70°	240.3	13.1
70°-80°	162.0	8.8
80°-90°	52.7	2.9
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°	475.6	25.9
0°-40°	776.5	42.2
0°-60°	1384.0	75.3
0°-90°	1839.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1839.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	617	617	617	617	617	
5°	611	613	615	616	617	58
15°	582	585	591	596	597	164
25°	530	533	547	554	558	244
35°	458	464	481	497	504	286
45°	381	384	406	430	441	291
55°	292	298	326	356	371	259
65°	197	206	241	276	293	196
75°	106	117	156	191	205	111
85°	25	35	52	61	60	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	617.0	617.0	617.0	617.0	617.0
2.5°	613.5	615.2	617.9	618.8	618.8
5°	610.8	612.6	615.2	616.1	617.0
7.5°	606.4	608.2	611.7	613.5	614.4
10°	600.3	602.0	606.4	609.1	610.0
12.5°	592.4	594.1	599.4	602.9	603.8
15°	581.8	585.3	590.6	595.9	596.8
17.5°	574.8	573.9	580.9	587.1	588.8
20°	558.0	562.4	570.4	577.4	579.2
22.5°	543.9	547.5	558.0	566.0	569.5
25°	529.9	533.4	546.6	554.5	558.0
27.5°	512.3	517.5	529.9	541.3	545.7
30°	494.7	499.9	514.0	527.2	532.5
32.5°	477.1	483.2	498.2	512.3	518.4
35°	457.7	463.9	480.6	497.3	504.3
37.5°	437.4	445.4	463.0	481.5	489.4
40°	417.2	425.1	443.6	464.7	473.5
42.5°	400.5	404.0	425.1	448.0	456.8
45°	381.1	383.8	405.8	430.4	441.0
47.5°	352.9	362.6	386.4	413.7	424.2
50°	330.9	341.5	366.2	395.2	406.6
52.5°	312.5	319.5	346.8	375.8	389.0
55°	292.2	297.5	325.7	356.5	370.6
57.5°	267.6	277.3	305.4	337.1	351.2
60°	240.3	252.6	283.4	317.7	331.8
62.5°	222.7	229.7	263.2	297.5	313.3
65°	197.2	206.0	241.2	276.4	293.1
67.5°	176.0	184.8	220.9	256.1	272.9
70°	153.1	162.0	199.8	235.0	251.7
72.5°	126.7	139.1	178.7	213.9	231.5
75°	105.6	117.1	155.8	191.0	205.1
77.5°	81.9	96.8	132.9	162.0	172.5
80°	60.7	75.7	108.3	129.4	139.1
82.5°	41.4	56.3	81.0	96.8	102.1
85°	24.6	35.2	51.9	60.7	59.9
87.5°	11.4	15.0	21.1	21.1	20.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)