

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: P308600

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-CA08-W2A-U-2700K**

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: P308600
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-L82765-CA08-W2A-U-2700K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 2700K 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: 1785.0 lumens
Efficiency: N/A
Efficacy: 106.9 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

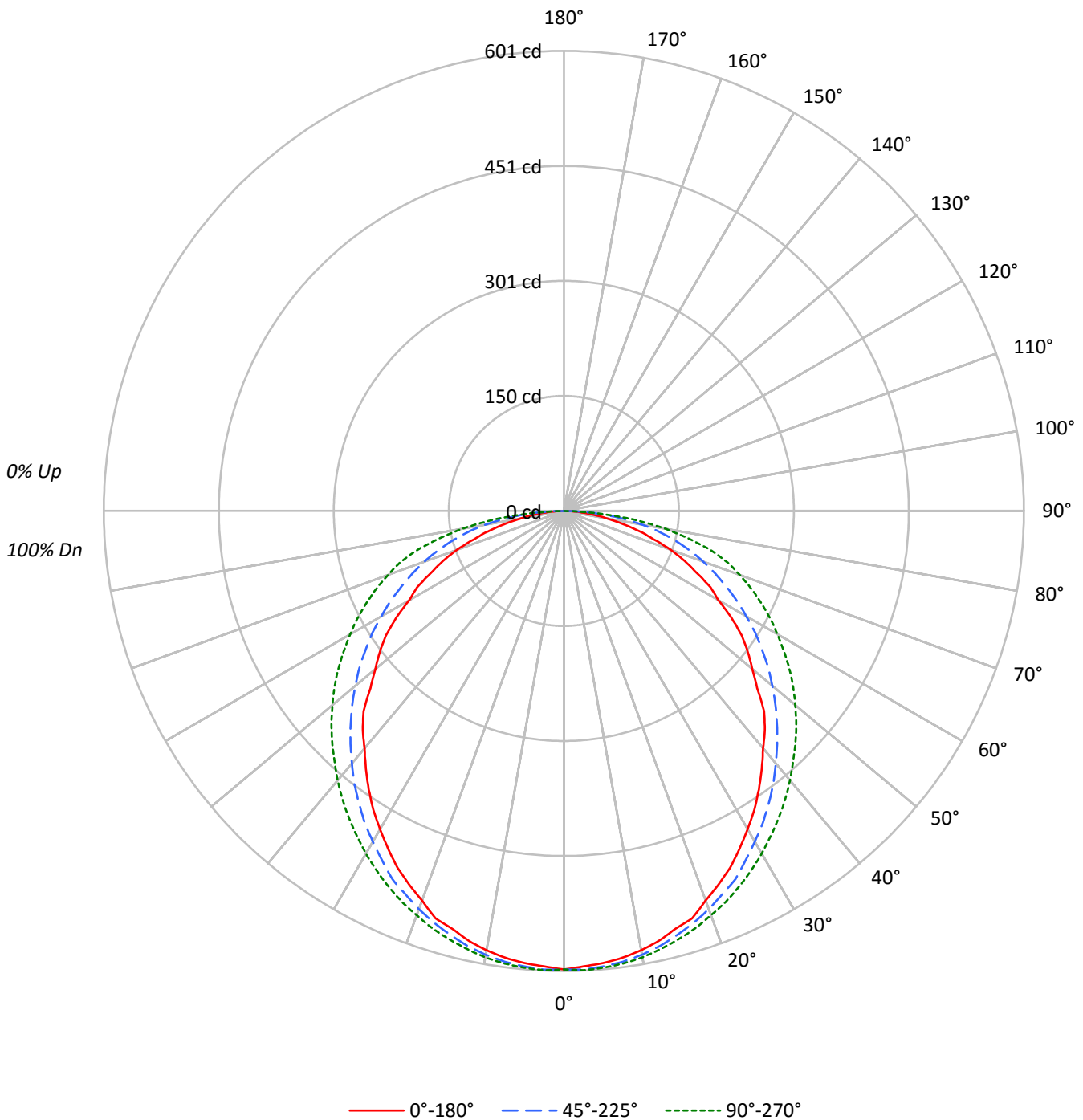
Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1612	1612	1612
5°	1602	1613	1618
10°	1592	1608	1618
15°	1573	1597	1614
20°	1551	1585	1610
25°	1527	1575	1608
30°	1492	1550	1606
35°	1459	1532	1608
40°	1423	1513	1614
45°	1408	1499	1629
50°	1345	1488	1652
55°	1331	1483	1688
60°	1255	1481	1734
65°	1219	1491	1812
70°	1170	1526	1922
75°	1066	1572	2070
80°	913	1629	2092
85°	738	1556	1794



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.7	3.2
10°-20°	161.7	9.1
20°-30°	243.3	13.6
30°-40°	292.0	16.4
40°-50°	305.2	17.1
50°-60°	284.4	15.9
60°-70°	233.3	13.1
70°-80°	157.2	8.8
80°-90°	51.2	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°	461.6	25.9
0°-40°	753.6	42.2
0°-60°	1343.3	75.3
0°-90°	1785.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1785.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	599	599	599	599	599	
5°	593	595	597	598	599	56
15°	565	568	573	578	579	160
25°	514	518	530	538	542	236
35°	444	450	466	483	490	278
45°	370	372	394	418	428	283
55°	284	289	316	346	360	251
65°	191	200	234	268	284	190
75°	102	114	151	185	199	108
85°	24	34	50	59	58	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	598.9	598.9	598.9	598.9	598.9
2.5°	595.5	597.2	599.7	600.6	600.6
5°	592.9	594.6	597.2	598.0	598.9
7.5°	588.6	590.3	593.8	595.5	596.3
10°	582.7	584.4	588.6	591.2	592.0
12.5°	575.0	576.7	581.8	585.2	586.1
15°	564.7	568.1	573.3	578.4	579.2
17.5°	557.9	557.0	563.9	569.8	571.5
20°	541.6	545.9	553.6	560.4	562.1
22.5°	528.0	531.4	541.6	549.3	552.7
25°	514.3	517.7	530.5	538.2	541.6
27.5°	497.2	502.3	514.3	525.4	529.7
30°	480.1	485.3	498.9	511.7	516.9
32.5°	463.0	469.0	483.5	497.2	503.2
35°	444.2	450.2	466.5	482.7	489.5
37.5°	424.6	432.3	449.4	467.3	475.0
40°	405.0	412.6	430.6	451.1	459.6
42.5°	388.7	392.1	412.6	434.9	443.4
45°	369.9	372.5	393.8	417.8	428.0
47.5°	342.6	352.0	375.0	401.5	411.8
50°	321.2	331.5	355.4	383.6	394.7
52.5°	303.3	310.1	336.6	364.8	377.6
55°	283.6	288.8	316.1	346.0	359.7
57.5°	259.7	269.1	296.5	327.2	340.9
60°	233.2	245.2	275.1	308.4	322.1
62.5°	216.1	223.0	255.4	288.8	304.1
65°	191.4	199.9	234.1	268.3	284.5
67.5°	170.9	179.4	214.4	248.6	264.8
70°	148.7	157.2	193.9	228.1	244.3
72.5°	123.0	135.0	173.4	207.6	224.7
75°	102.5	113.6	151.2	185.4	199.1
77.5°	79.5	94.0	129.0	157.2	167.4
80°	58.9	73.5	105.1	125.6	135.0
82.5°	40.2	54.7	78.6	94.0	99.1
85°	23.9	34.2	50.4	58.9	58.1
87.5°	11.1	14.5	20.5	20.5	19.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)