

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: P308151

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-HRP-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: P308151
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: 22FCZ2-29HE-UNV-L82765-HRP-CA08-W2A-U-3000K
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: 1883.0 lumens
Efficiency: N/A
Efficacy: 84.8 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

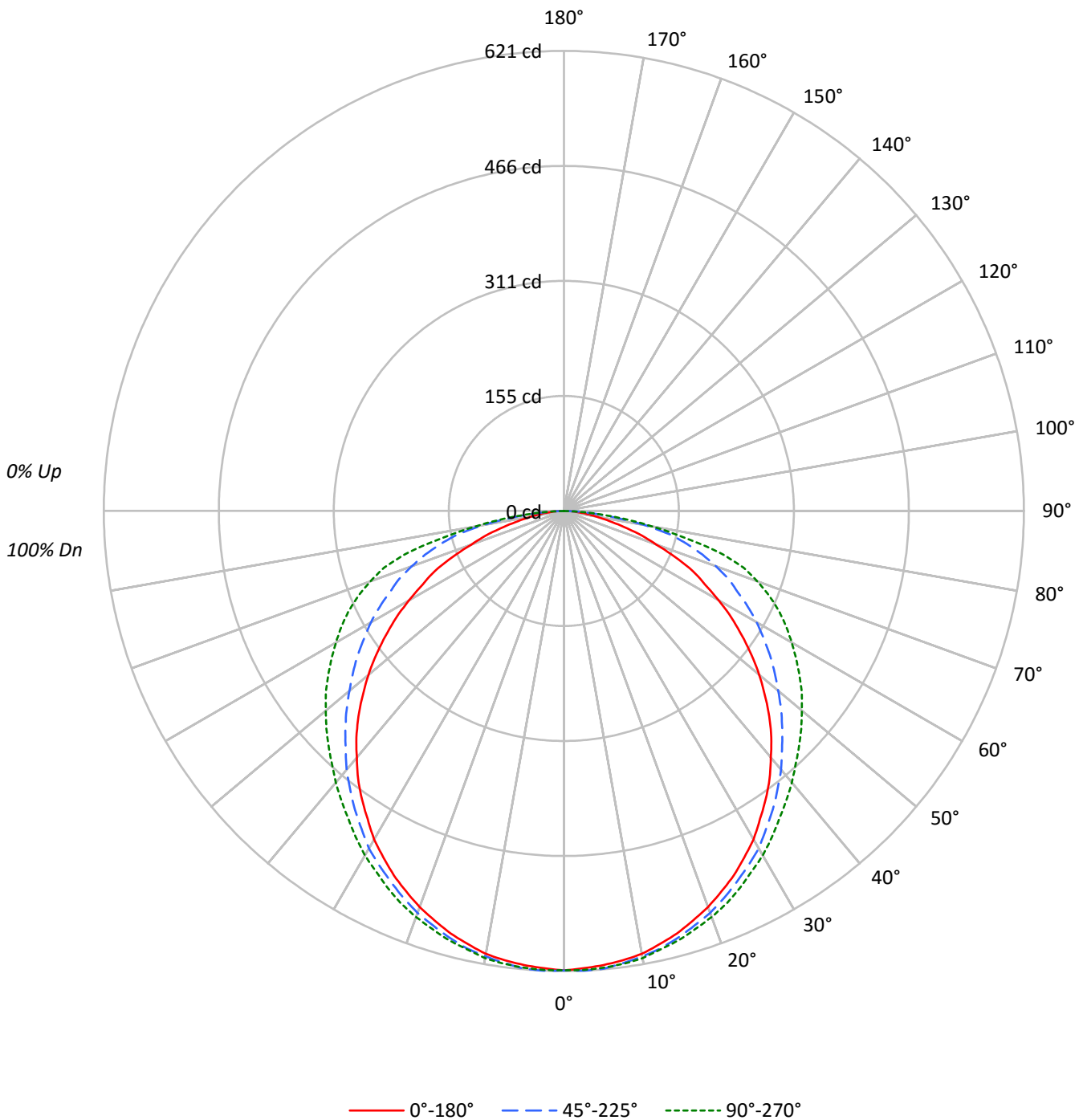
Input Watts (W): 22.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	83	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°	1669	1669	1669
5°	1662	1675	1672
10°	1659	1668	1675
15°	1645	1661	1671
20°	1629	1653	1670
25°	1612	1640	1668
30°	1591	1635	1668
35°	1561	1616	1666
40°	1527	1602	1682
45°	1492	1587	1709
50°	1442	1581	1755
55°	1377	1594	1822
60°	1298	1617	1912
65°	1225	1649	2042
70°	1046	1720	2187
75°	876	1790	2273
80°	717	1731	1895
85°	624	1284	1392



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.8	3.1
10°-20°	168.1	8.9
20°-30°	254.8	13.5
30°-40°	307.6	16.3
40°-50°	323.2	17.2
50°-60°	304.1	16.2
60°-70°	253.6	13.5
70°-80°	168.0	8.9
80°-90°	44.8	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°	481.6	25.6
0°-40°	789.2	41.9
0°-60°	1416.6	75.2
0°-90°	1883.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1883.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	620	620	620	620	620	
5°	615	616	620	620	619	58
15°	590	593	596	599	600	166
25°	543	546	552	560	562	250
35°	475	480	492	502	507	297
45°	392	398	417	438	449	302
55°	293	306	340	374	388	262
65°	192	209	259	302	321	187
75°	84	118	172	208	219	92
85°	20	31	42	45	45	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	620.1	620.1	620.1	620.1	620.1
2.5°	617.7	618.9	621.2	621.2	620.1
5°	615.3	616.5	620.1	620.1	618.9
7.5°	611.7	612.9	615.3	617.7	616.5
10°	607.0	608.2	610.5	612.9	612.9
12.5°	598.7	599.9	604.6	605.8	605.8
15°	590.4	592.7	596.3	598.7	599.9
17.5°	579.7	582.0	586.8	591.5	591.5
20°	569.0	571.3	577.3	582.0	583.2
22.5°	555.9	559.5	565.4	571.3	573.7
25°	542.8	546.4	552.3	559.5	561.8
27.5°	527.4	531.0	539.3	547.6	548.8
30°	512.0	515.5	526.2	533.3	536.9
32.5°	493.0	497.7	508.4	519.1	522.6
35°	475.1	479.9	491.8	502.5	507.2
37.5°	456.1	460.9	473.9	487.0	493.0
40°	434.7	440.7	456.1	470.4	478.7
42.5°	414.6	420.5	435.9	454.9	463.3
45°	392.0	397.9	416.9	438.3	449.0
47.5°	368.2	375.4	397.9	424.1	434.7
50°	344.5	352.8	377.7	407.4	419.3
52.5°	319.5	330.2	358.7	390.8	405.1
55°	293.4	306.5	339.7	374.2	388.4
57.5°	268.5	280.3	319.5	356.4	371.8
60°	241.1	256.6	300.5	338.5	355.2
62.5°	215.0	231.6	280.3	320.7	338.5
65°	192.4	209.1	258.9	301.7	320.7
67.5°	162.7	185.3	241.1	281.5	300.5
70°	133.0	163.9	218.6	260.1	278.0
72.5°	110.5	140.2	196.0	237.6	254.2
75°	84.3	117.6	172.2	207.9	218.6
77.5°	63.0	97.4	147.3	165.1	166.3
80°	46.3	74.8	111.7	117.6	122.3
82.5°	32.1	52.3	72.5	79.6	82.0
85°	20.2	30.9	41.6	45.1	45.1
87.5°	10.7	11.9	14.3	14.3	14.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)