

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: P308155

Luminaire Tested: **22FCZ2-29HE-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: P308155
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-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: 2054.0 lumens
Efficiency: N/A
Efficacy: 89.7 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

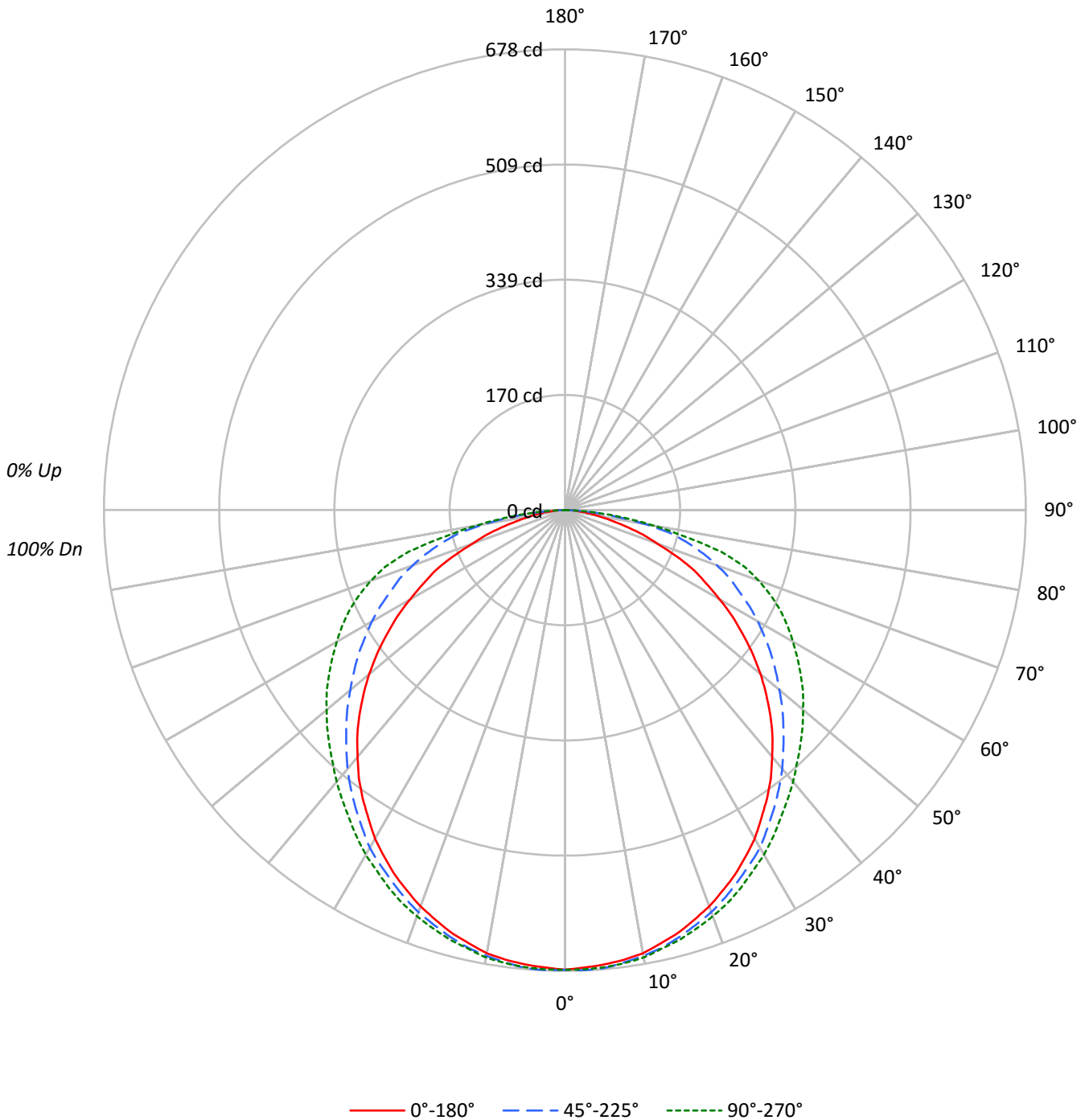
Input Watts (W): 22.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1820	1820	1820
5°	1813	1827	1824
10°	1809	1820	1827
15°	1794	1812	1823
20°	1777	1803	1822
25°	1758	1789	1820
30°	1735	1784	1820
35°	1703	1762	1818
40°	1666	1748	1834
45°	1627	1731	1864
50°	1573	1725	1915
55°	1501	1739	1988
60°	1415	1764	2085
65°	1337	1799	2227
70°	1142	1876	2386
75°	957	1954	2479
80°	783	1888	2069
85°	679	1399	1519



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.1	3.1
10°-20°	183.4	8.9
20°-30°	277.9	13.5
30°-40°	335.6	16.3
40°-50°	352.6	17.2
50°-60°	331.7	16.2
60°-70°	276.6	13.5
70°-80°	183.3	8.9
80°-90°	48.8	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°	525.4	25.6
0°-40°	860.9	41.9
0°-60°	1545.3	75.2
0°-90°	2054.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2054.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	676	676	676	676	676	
5°	671	672	676	676	675	64
15°	644	647	650	653	654	182
25°	592	596	602	610	613	273
35°	518	524	536	548	553	324
45°	428	434	455	478	490	329
55°	320	334	371	408	424	286
65°	210	228	282	329	350	204
75°	92	128	188	227	238	100
85°	22	34	45	49	49	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	676.4	676.4	676.4	676.4	676.4
2.5°	673.8	675.1	677.7	677.7	676.4
5°	671.2	672.5	676.4	676.4	675.1
7.5°	667.3	668.6	671.2	673.8	672.5
10°	662.1	663.4	666.0	668.6	668.6
12.5°	653.0	654.3	659.5	660.8	660.8
15°	644.0	646.6	650.4	653.0	654.3
17.5°	632.3	634.9	640.1	645.3	645.3
20°	620.6	623.2	629.7	634.9	636.2
22.5°	606.4	610.3	616.8	623.2	625.8
25°	592.1	596.0	602.5	610.3	612.9
27.5°	575.3	579.2	588.3	597.3	598.6
30°	558.4	562.3	574.0	581.8	585.7
32.5°	537.7	542.9	554.6	566.2	570.1
35°	518.3	523.5	536.4	548.1	553.3
37.5°	497.6	502.7	517.0	531.2	537.7
40°	474.2	480.7	497.6	513.1	522.2
42.5°	452.2	458.7	475.5	496.3	505.3
45°	427.6	434.1	454.8	478.1	489.8
47.5°	401.7	409.4	434.1	462.6	474.2
50°	375.8	384.8	412.0	444.4	457.4
52.5°	348.5	360.2	391.3	426.3	441.8
55°	320.0	334.3	370.6	408.1	423.7
57.5°	292.8	305.8	348.5	388.7	405.6
60°	263.0	279.9	327.8	369.3	387.4
62.5°	234.5	252.7	305.8	349.8	369.3
65°	209.9	228.0	282.5	329.1	349.8
67.5°	177.5	202.1	263.0	307.1	327.8
70°	145.1	178.8	238.4	283.8	303.2
72.5°	120.5	152.9	213.8	259.1	277.3
75°	92.0	128.3	187.9	226.7	238.4
77.5°	68.7	106.2	160.7	180.1	181.4
80°	50.5	81.6	121.8	128.3	133.5
82.5°	35.0	57.0	79.0	86.8	89.4
85°	22.0	33.7	45.3	49.2	49.2
87.5°	11.7	13.0	15.5	15.5	15.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)