

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: P308154

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-HRP-CA08-W2A-U-4500K**

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: P308154
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-4500K
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: 2026.0 lumens
Efficiency: N/A
Efficacy: 88.9 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

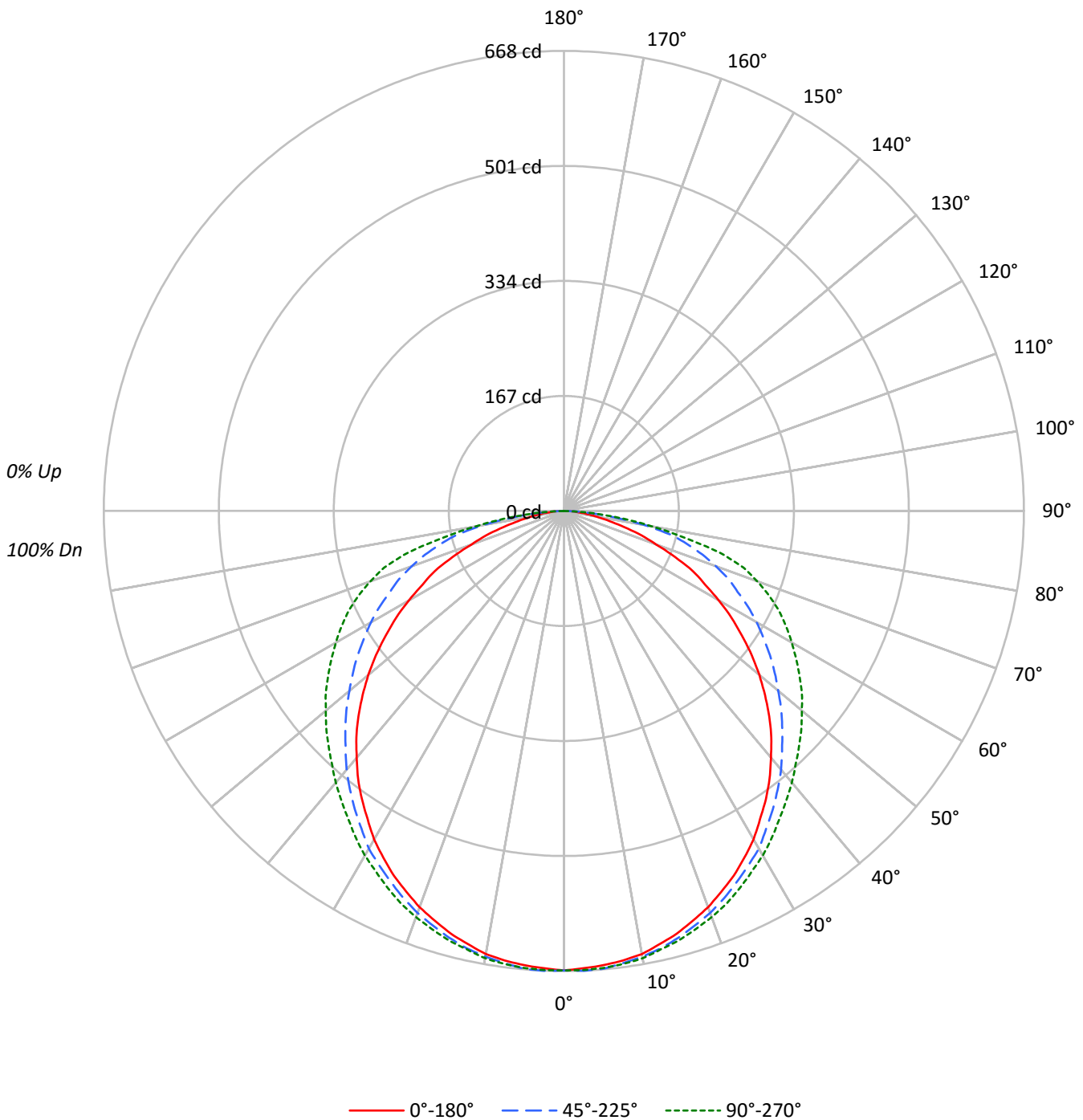
Input Watts (W): 22.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1795	1795	1795
5°	1788	1802	1799
10°	1785	1795	1802
15°	1770	1787	1798
20°	1753	1779	1797
25°	1734	1765	1795
30°	1711	1759	1795
35°	1679	1738	1793
40°	1643	1724	1809
45°	1605	1707	1838
50°	1551	1701	1888
55°	1481	1715	1961
60°	1396	1740	2056
65°	1318	1774	2197
70°	1126	1851	2353
75°	943	1927	2445
80°	772	1861	2039
85°	670	1380	1501



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.2	3.1
10°-20°	180.9	8.9
20°-30°	274.1	13.5
30°-40°	331.0	16.3
40°-50°	347.8	17.2
50°-60°	327.2	16.2
60°-70°	272.8	13.5
70°-80°	180.8	8.9
80°-90°	48.2	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°	518.2	25.6
0°-40°	849.2	41.9
0°-60°	1524.2	75.2
0°-90°	2026.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2026.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	667	667	667	667	667	
5°	662	663	667	667	666	63
15°	635	638	642	644	645	179
25°	584	588	594	602	604	269
35°	511	516	529	541	546	320
45°	422	428	449	472	483	325
55°	316	330	366	403	418	282
65°	207	225	279	325	345	201
75°	91	126	185	224	235	98
85°	22	33	45	49	49	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	667.1	667.1	667.1	667.1	667.1
2.5°	664.6	665.9	668.4	668.4	667.1
5°	662.0	663.3	667.1	667.1	665.9
7.5°	658.2	659.5	662.0	664.6	663.3
10°	653.1	654.4	656.9	659.5	659.5
12.5°	644.1	645.4	650.5	651.8	651.8
15°	635.2	637.7	641.6	644.1	645.4
17.5°	623.7	626.2	631.4	636.5	636.5
20°	612.2	614.7	621.1	626.2	627.5
22.5°	598.1	602.0	608.3	614.7	617.3
25°	584.1	587.9	594.3	602.0	604.5
27.5°	567.5	571.3	580.2	589.2	590.5
30°	550.8	554.7	566.2	573.8	577.7
32.5°	530.4	535.5	547.0	558.5	562.3
35°	511.2	516.3	529.1	540.6	545.7
37.5°	490.8	495.9	509.9	524.0	530.4
40°	467.8	474.2	490.8	506.1	515.1
42.5°	446.0	452.4	469.0	489.5	498.4
45°	421.8	428.1	448.6	471.6	483.1
47.5°	396.2	403.9	428.1	456.3	467.8
50°	370.6	379.6	406.4	438.4	451.1
52.5°	343.8	355.3	386.0	420.5	435.8
55°	315.7	329.7	365.5	402.6	417.9
57.5°	288.8	301.6	343.8	383.4	400.0
60°	259.4	276.1	323.3	364.2	382.1
62.5°	231.3	249.2	301.6	345.1	364.2
65°	207.0	224.9	278.6	324.6	345.1
67.5°	175.1	199.4	259.4	302.9	323.3
70°	143.1	176.4	235.2	279.9	299.1
72.5°	118.9	150.8	210.9	255.6	273.5
75°	90.7	126.5	185.3	223.7	235.2
77.5°	67.7	104.8	158.5	177.6	178.9
80°	49.8	80.5	120.1	126.5	131.6
82.5°	34.5	56.2	78.0	85.6	88.2
85°	21.7	33.2	44.7	48.6	48.6
87.5°	11.5	12.8	15.3	15.3	15.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)