

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: P308157

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-HRP-CA08-W2A-U-5700K**

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: P308157
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-5700K
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: 2079.0 lumens
Efficiency: N/A
Efficacy: 90.4 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

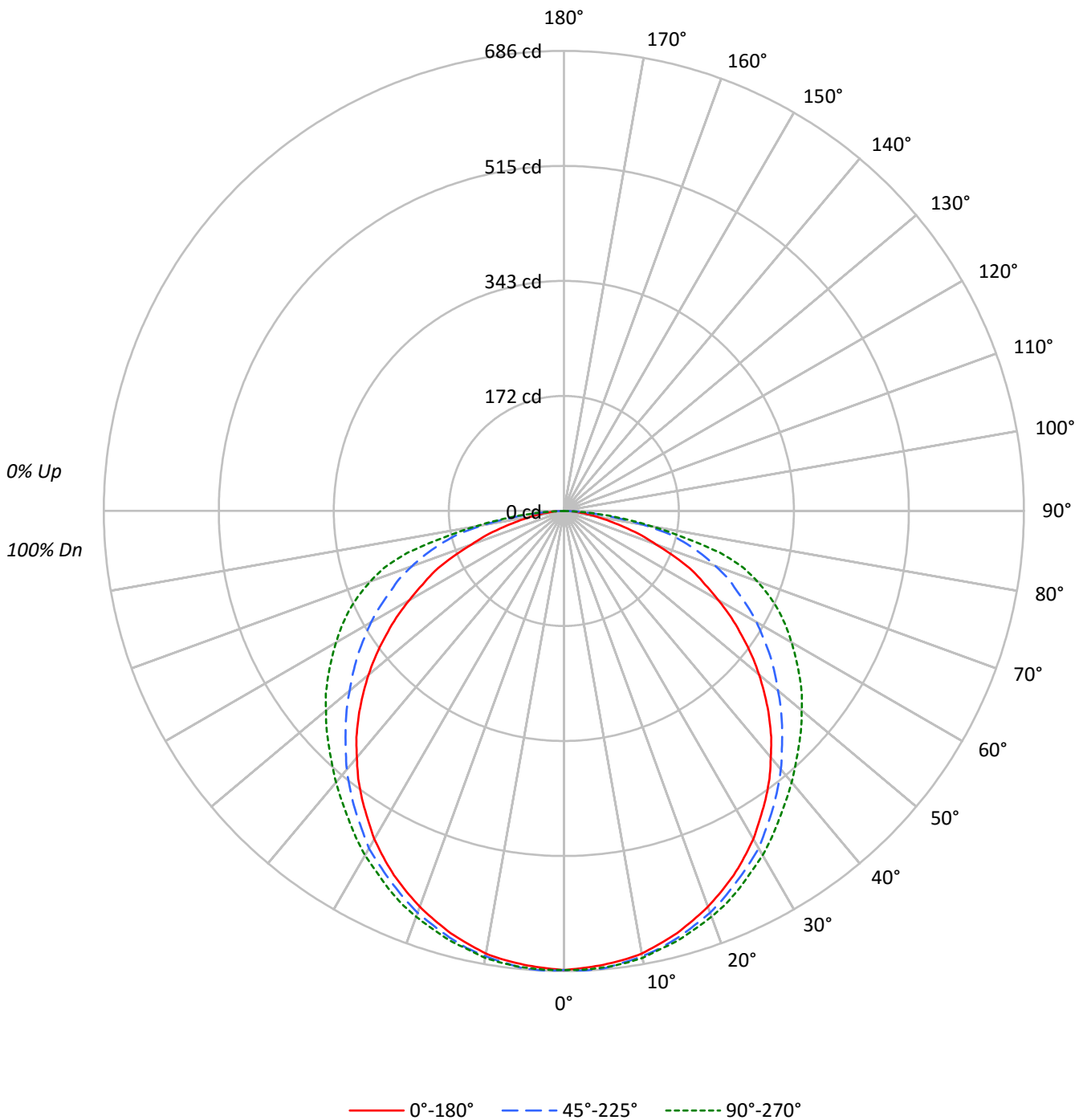
Input Watts (W): 23
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1842	1842	1842
5°	1835	1849	1846
10°	1831	1842	1849
15°	1816	1834	1845
20°	1799	1825	1844
25°	1779	1811	1842
30°	1756	1805	1842
35°	1723	1784	1840
40°	1686	1769	1857
45°	1647	1752	1886
50°	1592	1746	1938
55°	1520	1760	2012
60°	1433	1786	2110
65°	1353	1820	2255
70°	1156	1899	2415
75°	968	1978	2509
80°	792	1911	2094
85°	689	1417	1538



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.9	3.1
10°-20°	185.6	8.9
20°-30°	281.3	13.5
30°-40°	339.6	16.3
40°-50°	356.9	17.2
50°-60°	335.8	16.2
60°-70°	280.0	13.5
70°-80°	185.5	8.9
80°-90°	49.4	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°	531.8	25.6
0°-40°	871.4	41.9
0°-60°	1564.1	75.2
0°-90°	2079.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2079.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	685	685	685	685	685	
5°	679	681	685	685	683	65
15°	652	654	658	661	662	184
25°	599	603	610	618	620	276
35°	525	530	543	555	560	328
45°	433	439	460	484	496	333
55°	324	338	375	413	429	290
65°	212	231	286	333	354	207
75°	93	130	190	230	241	101
85°	22	34	46	50	50	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	684.6	684.6	684.6	684.6	684.6
2.5°	682.0	683.3	685.9	685.9	684.6
5°	679.3	680.7	684.6	684.6	683.3
7.5°	675.4	676.7	679.3	682.0	680.7
10°	670.2	671.5	674.1	676.7	676.7
12.5°	661.0	662.3	667.5	668.9	668.9
15°	651.8	654.4	658.4	661.0	662.3
17.5°	640.0	642.6	647.9	653.1	653.1
20°	628.2	630.8	637.4	642.6	643.9
22.5°	613.8	617.7	624.3	630.8	633.4
25°	599.3	603.3	609.8	617.7	620.3
27.5°	582.3	586.2	595.4	604.6	605.9
30°	565.2	569.2	581.0	588.9	592.8
32.5°	544.3	549.5	561.3	573.1	577.1
35°	524.6	529.8	543.0	554.8	560.0
37.5°	503.6	508.9	523.3	537.7	544.3
40°	480.0	486.6	503.6	519.3	528.5
42.5°	457.7	464.3	481.3	502.3	511.5
45°	432.8	439.3	460.3	483.9	495.7
47.5°	406.6	414.4	439.3	468.2	480.0
50°	380.3	389.5	417.0	449.8	463.0
52.5°	352.8	364.6	396.1	431.5	447.2
55°	323.9	338.4	375.1	413.1	428.9
57.5°	296.4	309.5	352.8	393.4	410.5
60°	266.2	283.3	331.8	373.8	392.1
62.5°	237.4	255.7	309.5	354.1	373.8
65°	212.5	230.8	285.9	333.1	354.1
67.5°	179.7	204.6	266.2	310.8	331.8
70°	146.9	181.0	241.3	287.2	306.9
72.5°	122.0	154.8	216.4	262.3	280.7
75°	93.1	129.8	190.2	229.5	241.3
77.5°	69.5	107.5	162.6	182.3	183.6
80°	51.1	82.6	123.3	129.8	135.1
82.5°	35.4	57.7	80.0	87.9	90.5
85°	22.3	34.1	45.9	49.8	49.8
87.5°	11.8	13.1	15.7	15.7	15.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)