

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: P308190

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-HRP-CP250-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: P308190
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-CP250-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB 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: 1880.0 lumens
Efficiency: N/A
Efficacy: 82.5 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

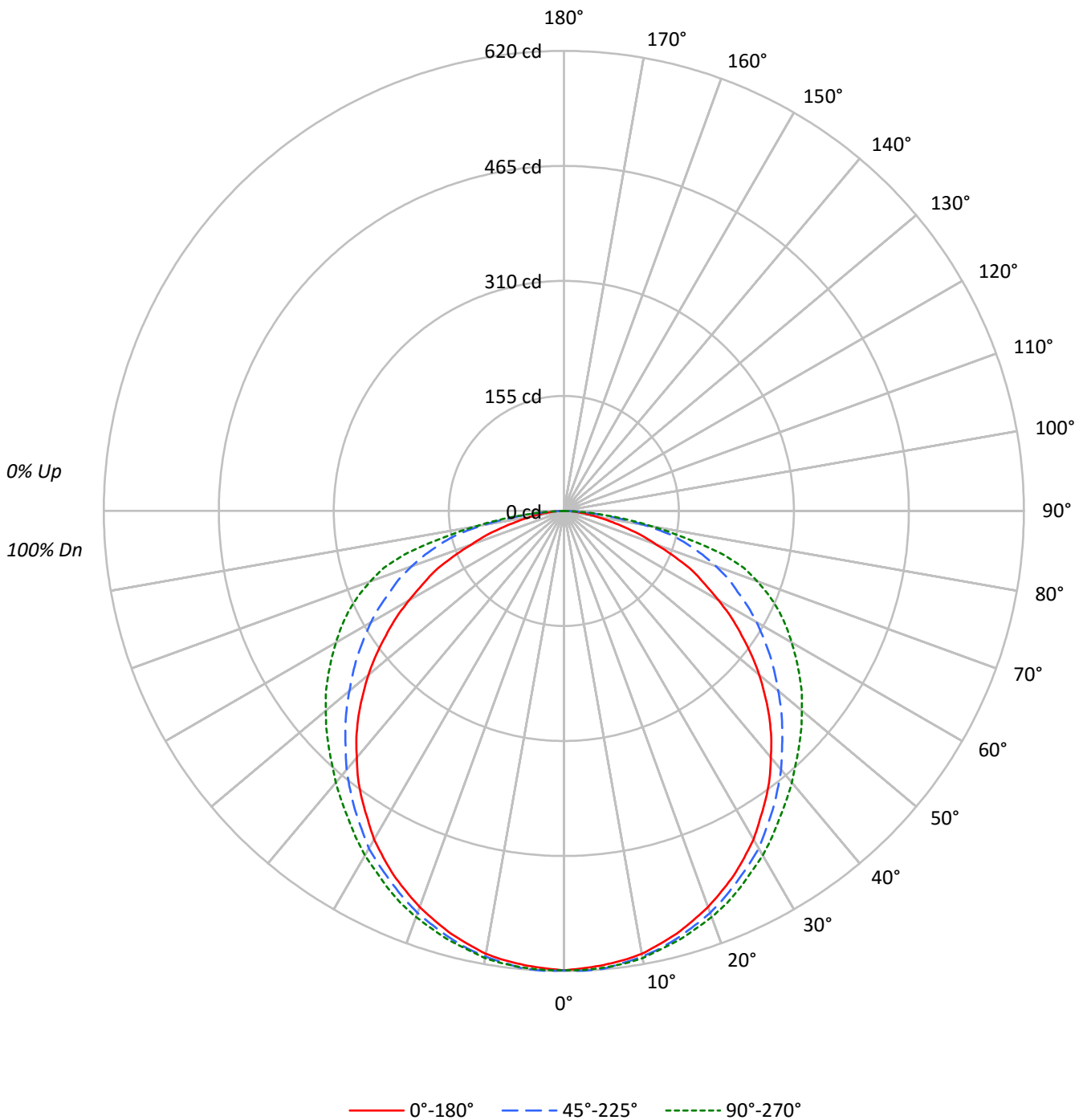
Input Watts (W): 22.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1666	1666	1666
5°	1659	1672	1669
10°	1656	1666	1672
15°	1642	1658	1668
20°	1627	1651	1668
25°	1609	1637	1666
30°	1588	1633	1665
35°	1558	1613	1664
40°	1525	1600	1679
45°	1490	1584	1706
50°	1440	1579	1752
55°	1374	1591	1819
60°	1295	1615	1908
65°	1223	1646	2039
70°	1045	1717	2183
75°	875	1788	2269
80°	717	1728	1894
85°	624	1281	1392



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.7	3.1
10°-20°	167.8	8.9
20°-30°	254.4	13.5
30°-40°	307.1	16.3
40°-50°	322.7	17.2
50°-60°	303.7	16.2
60°-70°	253.2	13.5
70°-80°	167.8	8.9
80°-90°	44.7	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°	480.9	25.6
0°-40°	788.0	41.9
0°-60°	1414.4	75.2
0°-90°	1880.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1880.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	619	619	619	619	619	
5°	614	616	619	619	618	58
15°	589	592	595	598	599	166
25°	542	546	552	559	561	250
35°	474	479	491	502	506	297
45°	391	397	416	438	448	301
55°	293	306	339	374	388	262
65°	192	209	258	301	320	187
75°	84	117	172	208	218	91
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°	619.1	619.1	619.1	619.1	619.1
2.5°	616.7	617.9	620.2	620.2	619.1
5°	614.3	615.5	619.1	619.1	617.9
7.5°	610.8	611.9	614.3	616.7	615.5
10°	606.0	607.2	609.6	611.9	611.9
12.5°	597.7	598.9	603.6	604.8	604.8
15°	589.4	591.8	595.3	597.7	598.9
17.5°	578.7	581.1	585.9	590.6	590.6
20°	568.1	570.4	576.4	581.1	582.3
22.5°	555.0	558.6	564.5	570.4	572.8
25°	542.0	545.5	551.5	558.6	561.0
27.5°	526.6	530.1	538.4	546.7	547.9
30°	511.1	514.7	525.4	532.5	536.0
32.5°	492.2	496.9	507.6	518.3	521.8
35°	474.4	479.1	491.0	501.7	506.4
37.5°	455.4	460.1	473.2	486.2	492.2
40°	434.1	440.0	455.4	469.6	477.9
42.5°	413.9	419.8	435.2	454.2	462.5
45°	391.4	397.3	416.3	437.6	448.3
47.5°	367.6	374.8	397.3	423.4	434.1
50°	343.9	352.2	377.1	406.8	418.6
52.5°	319.0	329.7	358.2	390.2	404.4
55°	292.9	306.0	339.2	373.6	387.8
57.5°	268.0	279.9	319.0	355.8	371.2
60°	240.7	256.2	300.0	338.0	354.6
62.5°	214.7	231.3	279.9	320.2	338.0
65°	192.1	208.7	258.5	301.2	320.2
67.5°	162.5	185.0	240.7	281.1	300.0
70°	132.8	163.7	218.2	259.7	277.5
72.5°	110.3	139.9	195.7	237.2	253.8
75°	84.2	117.4	172.0	207.5	218.2
77.5°	62.9	97.2	147.1	164.8	166.0
80°	46.3	74.7	111.5	117.4	122.2
82.5°	32.0	52.2	72.3	79.5	81.8
85°	20.2	30.8	41.5	45.1	45.1
87.5°	10.7	11.9	14.2	14.2	14.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)