

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: P308193

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-HRP-CP250-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: P308193
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-5700K
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: 1929.0 lumens
Efficiency: N/A
Efficacy: 83.9 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

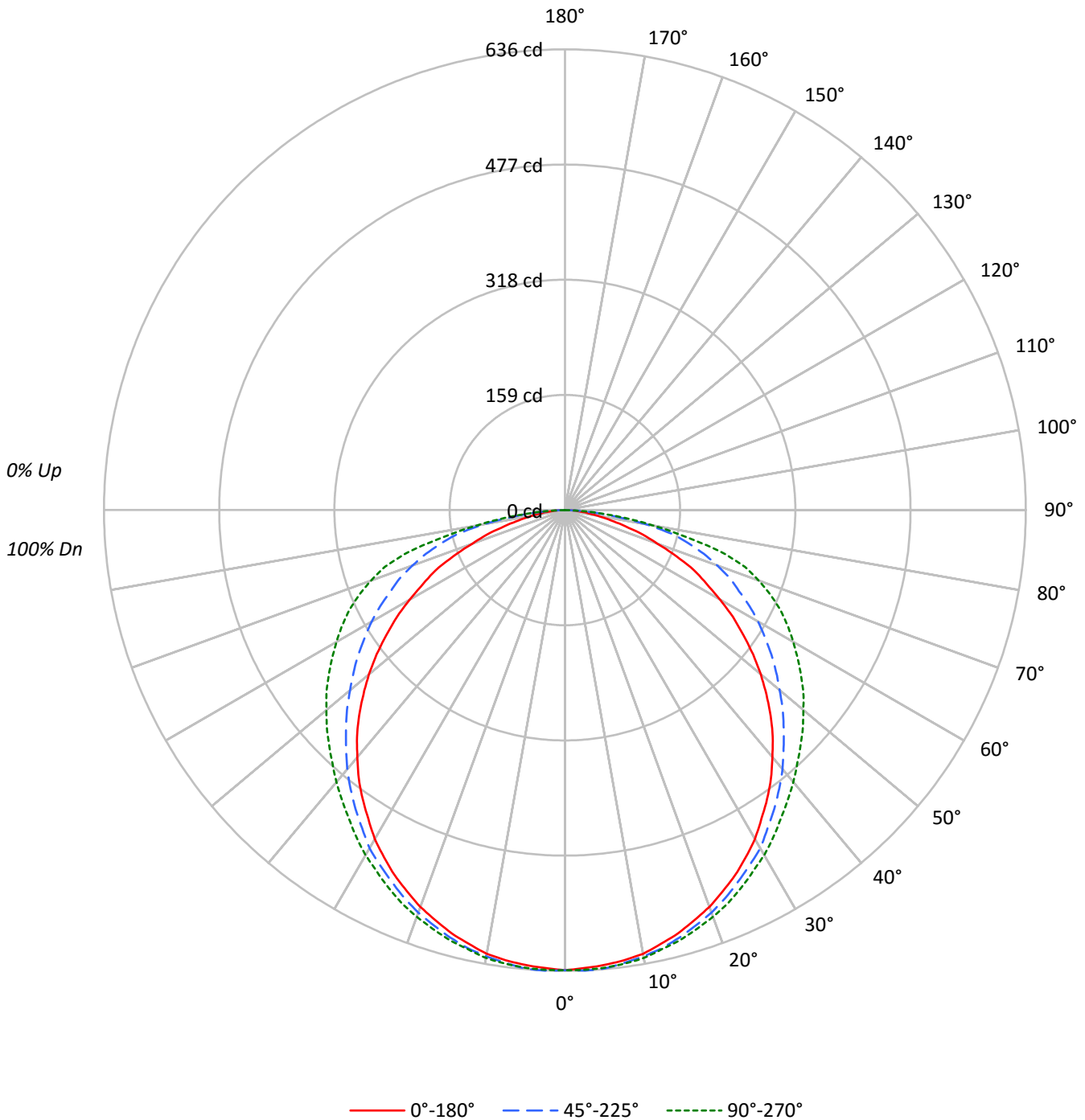
Input Watts (W): 23
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1709	1709	1709
5°	1703	1716	1713
10°	1699	1709	1716
15°	1685	1702	1712
20°	1669	1694	1711
25°	1651	1680	1709
30°	1630	1675	1709
35°	1599	1655	1707
40°	1565	1642	1723
45°	1528	1625	1751
50°	1477	1620	1798
55°	1410	1633	1867
60°	1329	1657	1958
65°	1255	1689	2092
70°	1072	1762	2240
75°	898	1834	2328
80°	736	1773	1942
85°	639	1315	1426



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.2	3.1
10°-20°	172.2	8.9
20°-30°	261.0	13.5
30°-40°	315.1	16.3
40°-50°	331.1	17.2
50°-60°	311.6	16.2
60°-70°	259.8	13.5
70°-80°	172.1	8.9
80°-90°	45.9	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°	493.4	25.6
0°-40°	808.5	41.9
0°-60°	1451.2	75.2
0°-90°	1929.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1929.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	635	635	635	635	635	
5°	630	632	635	635	634	60
15°	605	607	611	613	614	171
25°	556	560	566	573	576	256
35°	487	492	504	515	520	304
45°	402	408	427	449	460	309
55°	301	314	348	383	398	269
65°	197	214	265	309	329	192
75°	86	120	176	213	224	94
85°	21	32	43	46	46	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	635.2	635.2	635.2	635.2	635.2
2.5°	632.8	634.0	636.4	636.4	635.2
5°	630.3	631.5	635.2	635.2	634.0
7.5°	626.7	627.9	630.3	632.8	631.5
10°	621.8	623.0	625.5	627.9	627.9
12.5°	613.3	614.5	619.4	620.6	620.6
15°	604.8	607.2	610.9	613.3	614.5
17.5°	593.8	596.3	601.1	606.0	606.0
20°	582.9	585.3	591.4	596.3	597.5
22.5°	569.5	573.1	579.2	585.3	587.7
25°	556.1	559.8	565.8	573.1	575.6
27.5°	540.3	543.9	552.5	561.0	562.2
30°	524.5	528.1	539.1	546.4	550.0
32.5°	505.0	509.9	520.8	531.8	535.4
35°	486.7	491.6	503.8	514.7	519.6
37.5°	467.3	472.1	485.5	498.9	505.0
40°	445.4	451.5	467.3	481.9	490.4
42.5°	424.7	430.8	446.6	466.1	474.6
45°	401.6	407.6	427.1	449.0	460.0
47.5°	377.2	384.5	407.6	434.4	445.4
50°	352.9	361.4	387.0	417.4	429.5
52.5°	327.3	338.3	367.5	400.3	414.9
55°	300.6	313.9	348.0	383.3	397.9
57.5°	275.0	287.2	327.3	365.1	380.9
60°	247.0	262.8	307.9	346.8	363.8
62.5°	220.3	237.3	287.2	328.6	346.8
65°	197.1	214.2	265.3	309.1	328.6
67.5°	166.7	189.8	247.0	288.4	307.9
70°	136.3	167.9	223.9	266.5	284.7
72.5°	113.2	143.6	200.8	243.4	260.4
75°	86.4	120.5	176.4	212.9	223.9
77.5°	64.5	99.8	150.9	169.1	170.4
80°	47.5	76.7	114.4	120.5	125.3
82.5°	32.9	53.5	74.2	81.5	84.0
85°	20.7	31.6	42.6	46.2	46.2
87.5°	11.0	12.2	14.6	14.6	14.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)