

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: P308191

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-HRP-CP250-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: P308191
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-5000K
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: 1906.0 lumens
Efficiency: N/A
Efficacy: 83.2 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

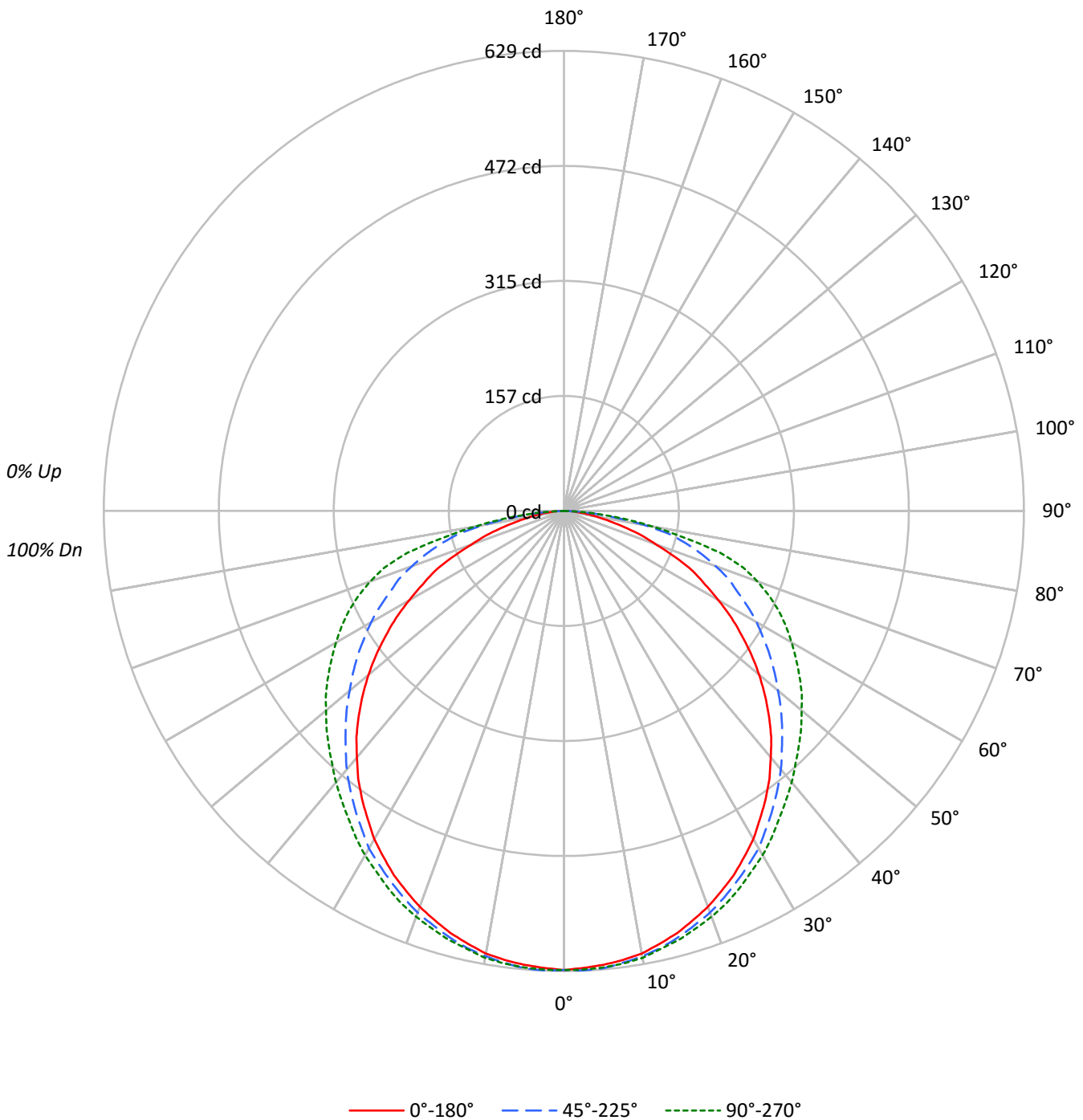
Input Watts (W): 22.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1689	1689	1689
5°	1682	1695	1692
10°	1679	1689	1695
15°	1665	1682	1692
20°	1649	1673	1691
25°	1632	1660	1689
30°	1610	1655	1689
35°	1580	1635	1687
40°	1546	1622	1702
45°	1510	1606	1730
50°	1460	1600	1777
55°	1393	1613	1845
60°	1314	1637	1935
65°	1240	1669	2067
70°	1060	1740	2213
75°	888	1812	2300
80°	727	1751	1918
85°	630	1300	1411



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.5	3.1
10°-20°	170.2	8.9
20°-30°	257.9	13.5
30°-40°	311.4	16.3
40°-50°	327.2	17.2
50°-60°	307.8	16.2
60°-70°	256.7	13.5
70°-80°	170.1	8.9
80°-90°	45.3	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°	487.5	25.6
0°-40°	798.9	41.9
0°-60°	1433.9	75.2
0°-90°	1906.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1906.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	628	628	628	628	628	
5°	623	624	628	628	626	59
15°	598	600	604	606	607	168
25°	550	553	559	566	569	253
35°	481	486	498	509	513	301
45°	397	403	422	444	454	306
55°	297	310	344	379	393	266
65°	195	212	262	305	325	190
75°	85	119	174	210	221	93
85°	20	31	42	46	46	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	627.6	627.6	627.6	627.6	627.6
2.5°	625.2	626.4	628.8	628.8	627.6
5°	622.8	624.0	627.6	627.6	626.4
7.5°	619.2	620.4	622.8	625.2	624.0
10°	614.4	615.6	618.0	620.4	620.4
12.5°	606.0	607.2	612.0	613.2	613.2
15°	597.6	600.0	603.6	606.0	607.2
17.5°	586.7	589.1	594.0	598.8	598.8
20°	575.9	578.3	584.3	589.1	590.4
22.5°	562.7	566.3	572.3	578.3	580.7
25°	549.5	553.1	559.1	566.3	568.7
27.5°	533.8	537.4	545.9	554.3	555.5
30°	518.2	521.8	532.6	539.9	543.5
32.5°	499.0	503.8	514.6	525.4	529.0
35°	480.9	485.7	497.8	508.6	513.4
37.5°	461.7	466.5	479.7	493.0	499.0
40°	440.1	446.1	461.7	476.1	484.5
42.5°	419.6	425.6	441.3	460.5	468.9
45°	396.8	402.8	422.0	443.7	454.5
47.5°	372.7	379.9	402.8	429.2	440.1
50°	348.7	357.1	382.3	412.4	424.4
52.5°	323.4	334.3	363.1	395.6	410.0
55°	297.0	310.2	343.9	378.7	393.2
57.5°	271.7	283.8	323.4	360.7	376.3
60°	244.1	259.7	304.2	342.7	359.5
62.5°	217.6	234.5	283.8	324.6	342.7
65°	194.8	211.6	262.1	305.4	324.6
67.5°	164.7	187.6	244.1	285.0	304.2
70°	134.7	165.9	221.2	263.3	281.3
72.5°	111.8	141.9	198.4	240.5	257.3
75°	85.4	119.0	174.3	210.4	221.2
77.5°	63.7	98.6	149.1	167.1	168.3
80°	46.9	75.7	113.0	119.0	123.8
82.5°	32.5	52.9	73.3	80.6	83.0
85°	20.4	31.3	42.1	45.7	45.7
87.5°	10.8	12.0	14.4	14.4	14.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)