

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: P308185

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-HRP-CP187-W2A-U-6500K**

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: P308185
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-CP187-W2A-U-6500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
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: 1950.0 lumens
Efficiency: N/A
Efficacy: 83.3 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

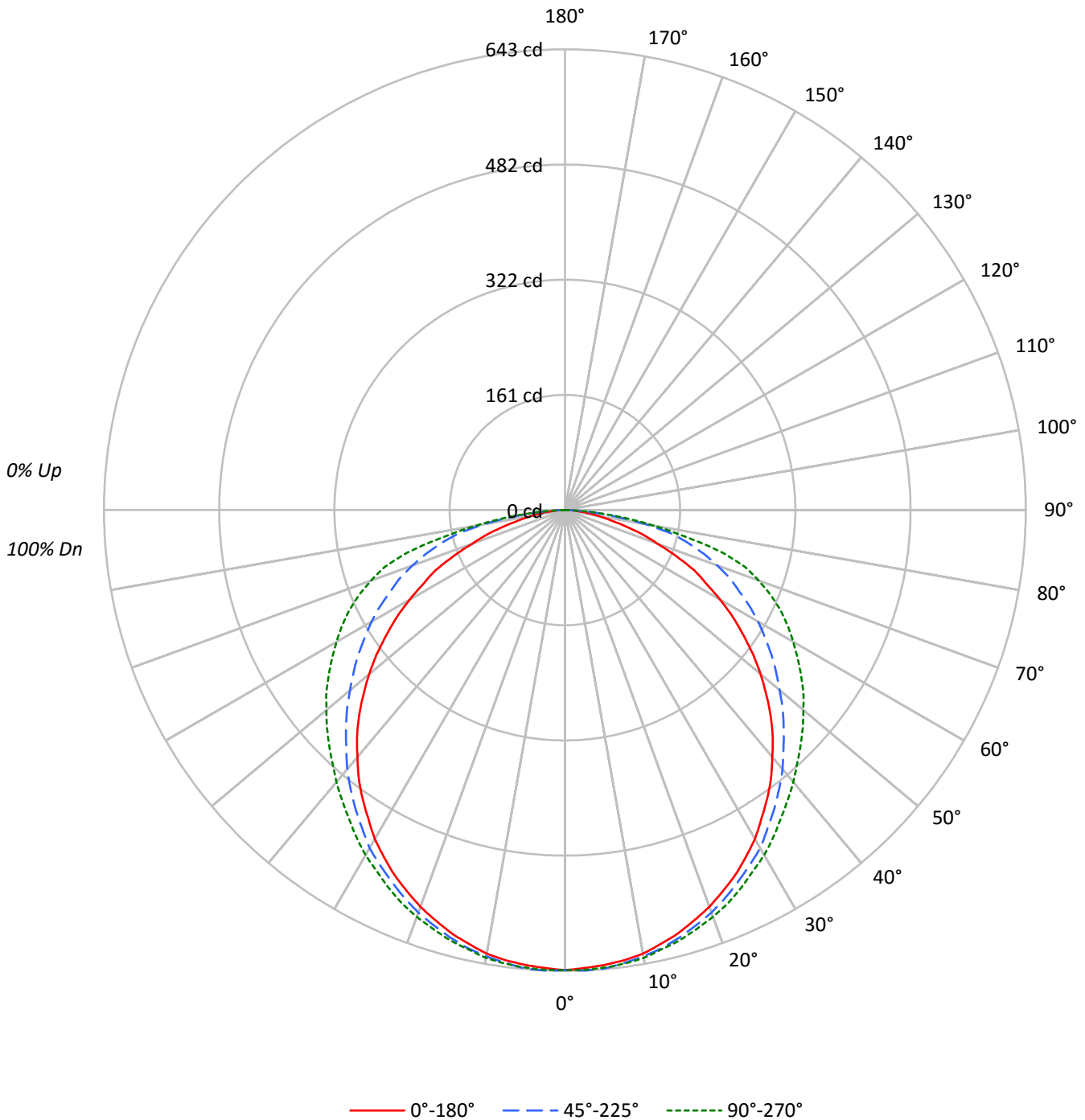
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1728	1728	1728
5°	1721	1734	1731
10°	1718	1728	1734
15°	1703	1720	1731
20°	1687	1712	1730
25°	1669	1698	1727
30°	1647	1693	1728
35°	1616	1673	1726
40°	1581	1659	1741
45°	1545	1643	1770
50°	1493	1638	1818
55°	1425	1650	1887
60°	1344	1675	1979
65°	1269	1708	2115
70°	1084	1781	2264
75°	908	1855	2353
80°	744	1791	1963
85°	645	1331	1442



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.9	3.1
10°-20°	174.1	8.9
20°-30°	263.8	13.5
30°-40°	318.6	16.3
40°-50°	334.7	17.2
50°-60°	315.0	16.2
60°-70°	262.6	13.5
70°-80°	174.0	8.9
80°-90°	46.4	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°	498.8	25.6
0°-40°	817.3	41.9
0°-60°	1467.0	75.2
0°-90°	1950.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1950.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	642	642	642	642	642	
5°	637	638	642	642	641	61
15°	611	614	618	620	621	172
25°	562	566	572	579	582	259
35°	492	497	509	520	525	308
45°	406	412	432	454	465	313
55°	304	317	352	388	402	272
65°	199	216	268	312	332	194
75°	87	122	178	215	226	95
85°	21	32	43	47	47	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	642.1	642.1	642.1	642.1	642.1
2.5°	639.7	640.9	643.3	643.3	642.1
5°	637.2	638.4	642.1	642.1	640.9
7.5°	633.5	634.7	637.2	639.7	638.4
10°	628.6	629.8	632.3	634.7	634.7
12.5°	620.0	621.2	626.1	627.4	627.4
15°	611.4	613.8	617.5	620.0	621.2
17.5°	600.3	602.7	607.7	612.6	612.6
20°	589.2	591.7	597.8	602.7	604.0
22.5°	575.7	579.4	585.5	591.7	594.1
25°	562.2	565.8	572.0	579.4	581.8
27.5°	546.2	549.9	558.5	567.1	568.3
30°	530.2	533.9	544.9	552.3	556.0
32.5°	510.5	515.4	526.5	537.6	541.2
35°	492.0	497.0	509.3	520.3	525.3
37.5°	472.4	477.3	490.8	504.3	510.5
40°	450.2	456.4	472.4	487.1	495.7
42.5°	429.3	435.5	451.4	471.1	479.7
45°	405.9	412.1	431.8	453.9	465.0
47.5°	381.3	388.7	412.1	439.1	450.2
50°	356.7	365.3	391.2	421.9	434.2
52.5°	330.9	342.0	371.5	404.7	419.5
55°	303.8	317.4	351.8	387.5	402.2
57.5°	278.0	290.3	330.9	369.0	385.0
60°	249.7	265.7	311.2	350.6	367.8
62.5°	222.6	239.9	290.3	332.1	350.6
65°	199.3	216.5	268.2	312.4	332.1
67.5°	168.5	191.9	249.7	291.5	311.2
70°	137.8	169.8	226.3	269.4	287.8
72.5°	114.4	145.2	203.0	246.0	263.2
75°	87.3	121.8	178.4	215.3	226.3
77.5°	65.2	100.9	152.5	171.0	172.2
80°	48.0	77.5	115.6	121.8	126.7
82.5°	33.2	54.1	75.0	82.4	84.9
85°	20.9	32.0	43.1	46.7	46.7
87.5°	11.1	12.3	14.8	14.8	14.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)