

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: P308177

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-HRP-CP187-W2A-U-2700K**

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: P308177
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-2700K
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: 1712.0 lumens
Efficiency: N/A
Efficacy: 76.4 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

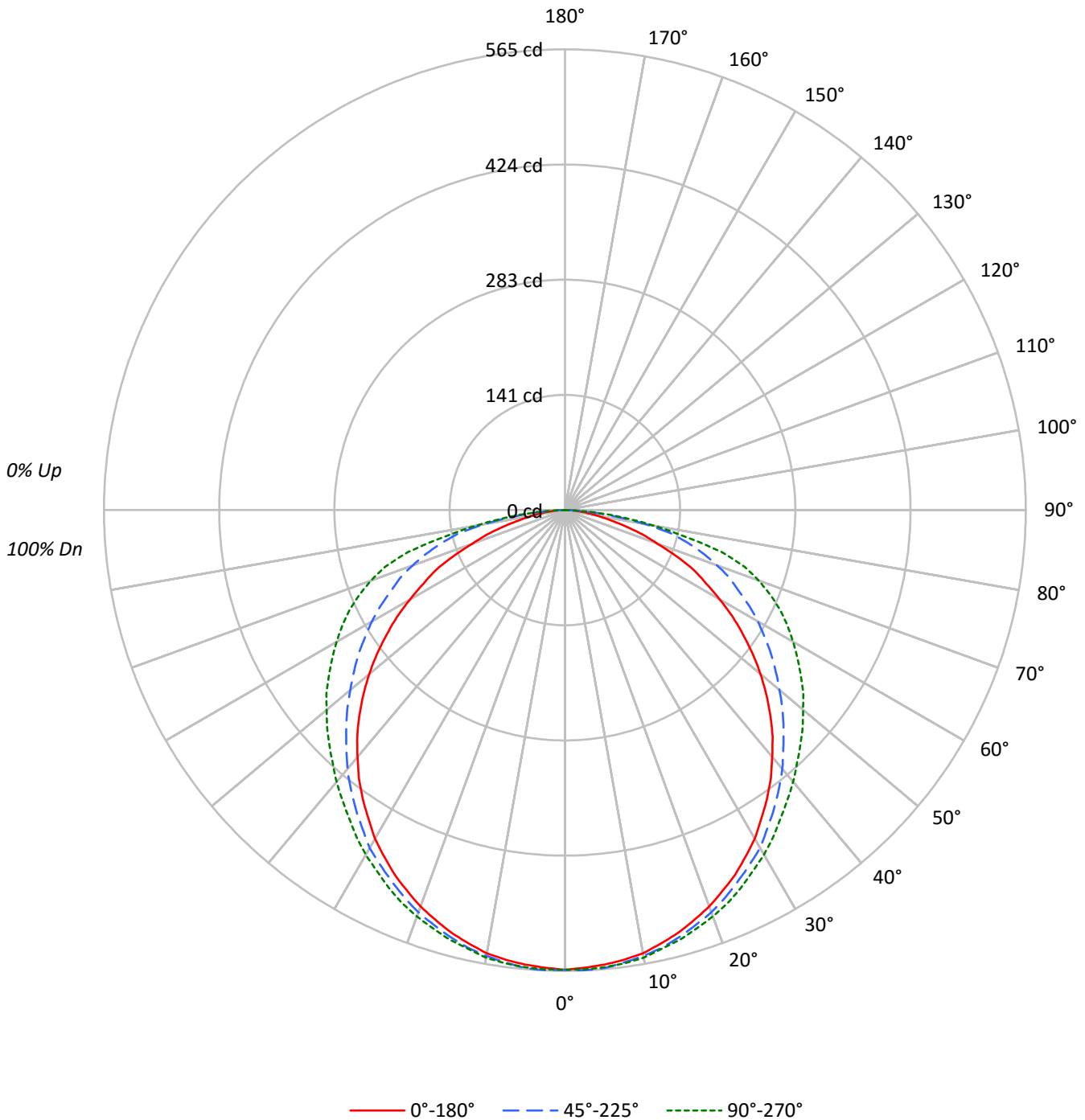
Input Watts (W): 22.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1517	1517	1517
5°	1511	1523	1520
10°	1508	1517	1523
15°	1495	1510	1519
20°	1481	1503	1519
25°	1465	1491	1517
30°	1446	1487	1517
35°	1419	1469	1515
40°	1389	1457	1529
45°	1356	1443	1553
50°	1311	1438	1596
55°	1252	1449	1657
60°	1180	1470	1738
65°	1114	1499	1857
70°	952	1563	1988
75°	797	1628	2066
80°	652	1573	1723
85°	568	1167	1266



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.4	3.1
10°-20°	152.8	8.9
20°-30°	231.6	13.5
30°-40°	279.7	16.3
40°-50°	293.9	17.2
50°-60°	276.5	16.2
60°-70°	230.6	13.5
70°-80°	152.8	8.9
80°-90°	40.7	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°	437.9	25.6
0°-40°	717.6	41.9
0°-60°	1288.0	75.2
0°-90°	1712.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1712.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	564	564	564	564	564	
5°	559	560	564	564	563	53
15°	537	539	542	544	545	151
25°	494	497	502	509	511	227
35°	432	436	447	457	461	270
45°	356	362	379	398	408	275
55°	267	279	309	340	353	239
65°	175	190	235	274	292	170
75°	77	107	157	189	199	83
85°	18	28	38	41	41	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	563.7	563.7	563.7	563.7	563.7
2.5°	561.6	562.7	564.8	564.8	563.7
5°	559.4	560.5	563.7	563.7	562.7
7.5°	556.2	557.3	559.4	561.6	560.5
10°	551.9	552.9	555.1	557.3	557.3
12.5°	544.3	545.4	549.7	550.8	550.8
15°	536.7	538.9	542.1	544.3	545.4
17.5°	527.0	529.2	533.5	537.8	537.8
20°	517.3	519.5	524.9	529.2	530.3
22.5°	505.4	508.7	514.1	519.5	521.6
25°	493.5	496.8	502.2	508.7	510.8
27.5°	479.5	482.7	490.3	497.9	498.9
30°	465.5	468.7	478.4	484.9	488.1
32.5°	448.2	452.5	462.2	471.9	475.2
35°	432.0	436.3	447.1	456.8	461.1
37.5°	414.7	419.0	430.9	442.8	448.2
40°	395.3	400.7	414.7	427.7	435.2
42.5°	376.9	382.3	396.3	413.6	421.2
45°	356.4	361.8	379.1	398.5	408.2
47.5°	334.8	341.3	361.8	385.5	395.3
50°	313.2	320.7	343.4	370.4	381.2
52.5°	290.5	300.2	326.1	355.3	368.3
55°	266.8	278.6	308.9	340.2	353.1
57.5°	244.1	254.9	290.5	324.0	338.0
60°	219.2	233.3	273.2	307.8	322.9
62.5°	195.5	210.6	254.9	291.6	307.8
65°	175.0	190.1	235.4	274.3	291.6
67.5°	148.0	168.5	219.2	256.0	273.2
70°	121.0	149.0	198.7	236.5	252.7
72.5°	100.4	127.4	178.2	216.0	231.1
75°	76.7	106.9	156.6	189.0	198.7
77.5°	57.2	88.6	133.9	150.1	151.2
80°	42.1	68.0	101.5	106.9	111.2
82.5°	29.2	47.5	65.9	72.4	74.5
85°	18.4	28.1	37.8	41.0	41.0
87.5°	9.7	10.8	13.0	13.0	13.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)