

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: P312496

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-HRP-CA125-W2A-U-3500K**

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: P312496
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-L83050-HRP-CA125-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 3500K 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: 2060.0 lumens
Efficiency: N/A
Efficacy: 92.0 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

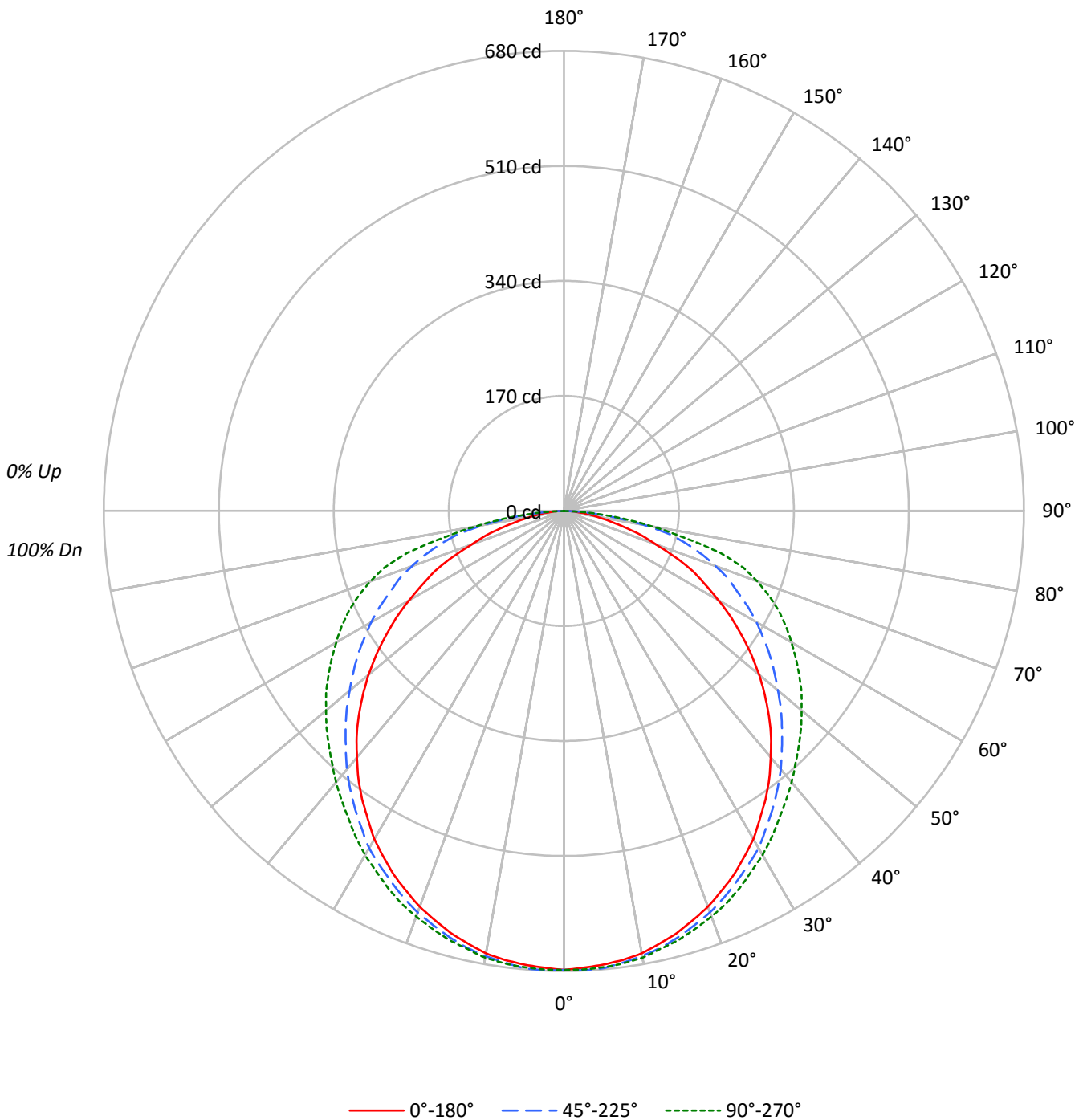
Input Watts (W): 22.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1825	1825	1825
5°	1818	1832	1829
10°	1814	1825	1832
15°	1799	1817	1828
20°	1783	1809	1827
25°	1763	1794	1825
30°	1740	1789	1825
35°	1708	1767	1823
40°	1671	1753	1840
45°	1632	1736	1869
50°	1578	1730	1920
55°	1506	1744	1993
60°	1420	1770	2091
65°	1340	1804	2234
70°	1145	1881	2393
75°	960	1959	2486
80°	786	1894	2073
85°	682	1405	1525



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.3	3.1
10°-20°	183.9	8.9
20°-30°	278.7	13.5
30°-40°	336.5	16.3
40°-50°	353.6	17.2
50°-60°	332.7	16.2
60°-70°	277.4	13.5
70°-80°	183.8	8.9
80°-90°	49.0	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°	526.9	25.6
0°-40°	863.4	41.9
0°-60°	1549.8	75.2
0°-90°	2060.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2060.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	678	678	678	678	678	
5°	673	674	678	678	677	64
15°	646	648	652	655	656	182
25°	594	598	604	612	615	273
35°	520	525	538	550	555	325
45°	429	435	456	480	491	330
55°	321	335	372	409	425	287
65°	210	229	283	330	351	205
75°	92	129	188	227	239	100
85°	22	34	46	49	49	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	678.3	678.3	678.3	678.3	678.3
2.5°	675.7	677.0	679.6	679.6	678.3
5°	673.1	674.4	678.3	678.3	677.0
7.5°	669.2	670.5	673.1	675.7	674.4
10°	664.0	665.3	667.9	670.5	670.5
12.5°	654.9	656.2	661.4	662.7	662.7
15°	645.8	648.4	652.3	654.9	656.2
17.5°	634.2	636.8	641.9	647.1	647.1
20°	622.5	625.1	631.6	636.8	638.1
22.5°	608.2	612.1	618.6	625.1	627.7
25°	593.9	597.8	604.3	612.1	614.7
27.5°	577.0	580.9	590.0	599.1	600.4
30°	560.1	564.0	575.7	583.5	587.4
32.5°	539.3	544.5	556.2	567.9	571.8
35°	519.8	525.0	538.0	549.7	554.9
37.5°	499.0	504.2	518.5	532.8	539.3
40°	475.6	482.1	499.0	514.6	523.7
42.5°	453.5	460.0	476.9	497.7	506.8
45°	428.8	435.3	456.1	479.5	491.2
47.5°	402.8	410.6	435.3	463.9	475.6
50°	376.9	385.9	413.2	445.7	458.7
52.5°	349.6	361.3	392.4	427.5	443.1
55°	321.0	335.3	371.7	409.3	424.9
57.5°	293.7	306.7	349.6	389.8	406.7
60°	263.8	280.7	328.8	370.4	388.5
62.5°	235.2	253.4	306.7	350.9	370.4
65°	210.5	228.7	283.3	330.1	350.9
67.5°	178.0	202.7	263.8	308.0	328.8
70°	145.5	179.3	239.1	284.6	304.1
72.5°	120.9	153.3	214.4	259.9	278.1
75°	92.3	128.6	188.4	227.4	239.1
77.5°	68.9	106.6	161.1	180.6	181.9
80°	50.7	81.9	122.2	128.6	133.8
82.5°	35.1	57.2	79.3	87.1	89.7
85°	22.1	33.8	45.5	49.4	49.4
87.5°	11.7	13.0	15.6	15.6	15.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)