

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: P312502

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-HRP-CP125-W2A-U-4000K**

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: P312502
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-CP125-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (168) 4000K 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: 2120.0 lumens
Efficiency: N/A
Efficacy: 92.6 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

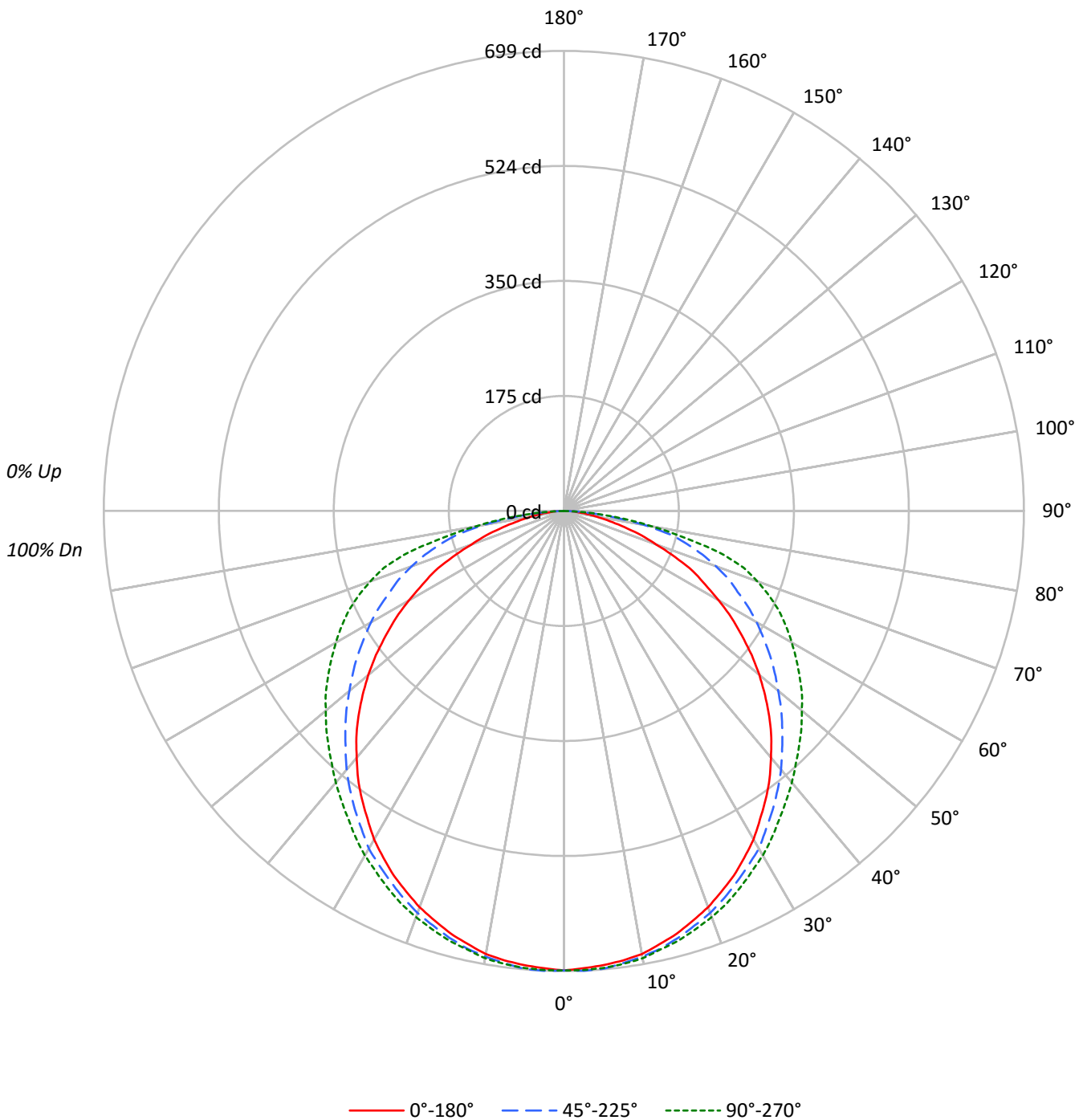
Input Watts (W): 22.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1879	1879	1879
5°	1871	1886	1882
10°	1867	1878	1886
15°	1852	1870	1882
20°	1834	1861	1880
25°	1815	1847	1878
30°	1791	1841	1878
35°	1757	1819	1876
40°	1720	1804	1893
45°	1679	1786	1924
50°	1623	1780	1976
55°	1550	1795	2052
60°	1461	1821	2152
65°	1379	1856	2299
70°	1179	1936	2462
75°	988	2016	2559
80°	809	1948	2134
85°	701	1445	1568



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.2	3.1
10°-20°	189.3	8.9
20°-30°	286.8	13.5
30°-40°	346.3	16.3
40°-50°	363.9	17.2
50°-60°	342.4	16.2
60°-70°	285.5	13.5
70°-80°	189.2	8.9
80°-90°	50.4	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°	542.2	25.6
0°-40°	888.6	41.9
0°-60°	1594.9	75.2
0°-90°	2120.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2120.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	698	698	698	698	698	
5°	693	694	698	698	697	66
15°	665	667	671	674	675	187
25°	611	615	622	630	633	281
35°	535	540	554	566	571	334
45°	441	448	469	494	506	340
55°	330	345	382	421	437	295
65°	217	235	292	340	361	211
75°	95	132	194	234	246	103
85°	23	35	47	51	51	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	698.1	698.1	698.1	698.1	698.1
2.5°	695.4	696.8	699.4	699.4	698.1
5°	692.7	694.1	698.1	698.1	696.8
7.5°	688.7	690.1	692.7	695.4	694.1
10°	683.4	684.7	687.4	690.1	690.1
12.5°	674.0	675.4	680.7	682.0	682.0
15°	664.7	667.3	671.3	674.0	675.4
17.5°	652.6	655.3	660.6	666.0	666.0
20°	640.6	643.3	649.9	655.3	656.6
22.5°	625.9	629.9	636.6	643.3	645.9
25°	611.2	615.2	621.9	629.9	632.6
27.5°	593.8	597.8	607.2	616.5	617.9
30°	576.4	580.4	592.4	600.5	604.5
32.5°	555.0	560.3	572.4	584.4	588.4
35°	534.9	540.3	553.7	565.7	571.0
37.5°	513.5	518.9	533.6	548.3	555.0
40°	489.5	496.2	513.5	529.6	538.9
42.5°	466.7	473.4	490.8	512.2	521.6
45°	441.3	448.0	469.4	493.5	505.5
47.5°	414.6	422.6	448.0	477.4	489.5
50°	387.8	397.2	425.3	458.7	472.1
52.5°	359.7	371.8	403.9	440.0	456.0
55°	330.3	345.0	382.5	421.3	437.3
57.5°	302.2	315.6	359.7	401.2	418.6
60°	271.5	288.9	338.3	381.1	399.9
62.5°	242.1	260.8	315.6	361.1	381.1
65°	216.6	235.4	291.5	339.7	361.1
67.5°	183.2	208.6	271.5	316.9	338.3
70°	149.8	184.6	246.1	292.9	312.9
72.5°	124.4	157.8	220.7	267.5	286.2
75°	95.0	132.4	193.9	234.0	246.1
77.5°	70.9	109.7	165.8	185.9	187.2
80°	52.2	84.3	125.7	132.4	137.7
82.5°	36.1	58.8	81.6	89.6	92.3
85°	22.7	34.8	46.8	50.8	50.8
87.5°	12.0	13.4	16.0	16.0	16.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)