

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: P308511

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-RDP-CA08-W2A-U-3000K**

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: P308511
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-39HE-UNV-L82765-RDP-CA08-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC 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: 2241.0 lumens
Efficiency: N/A
Efficacy: 69.6 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

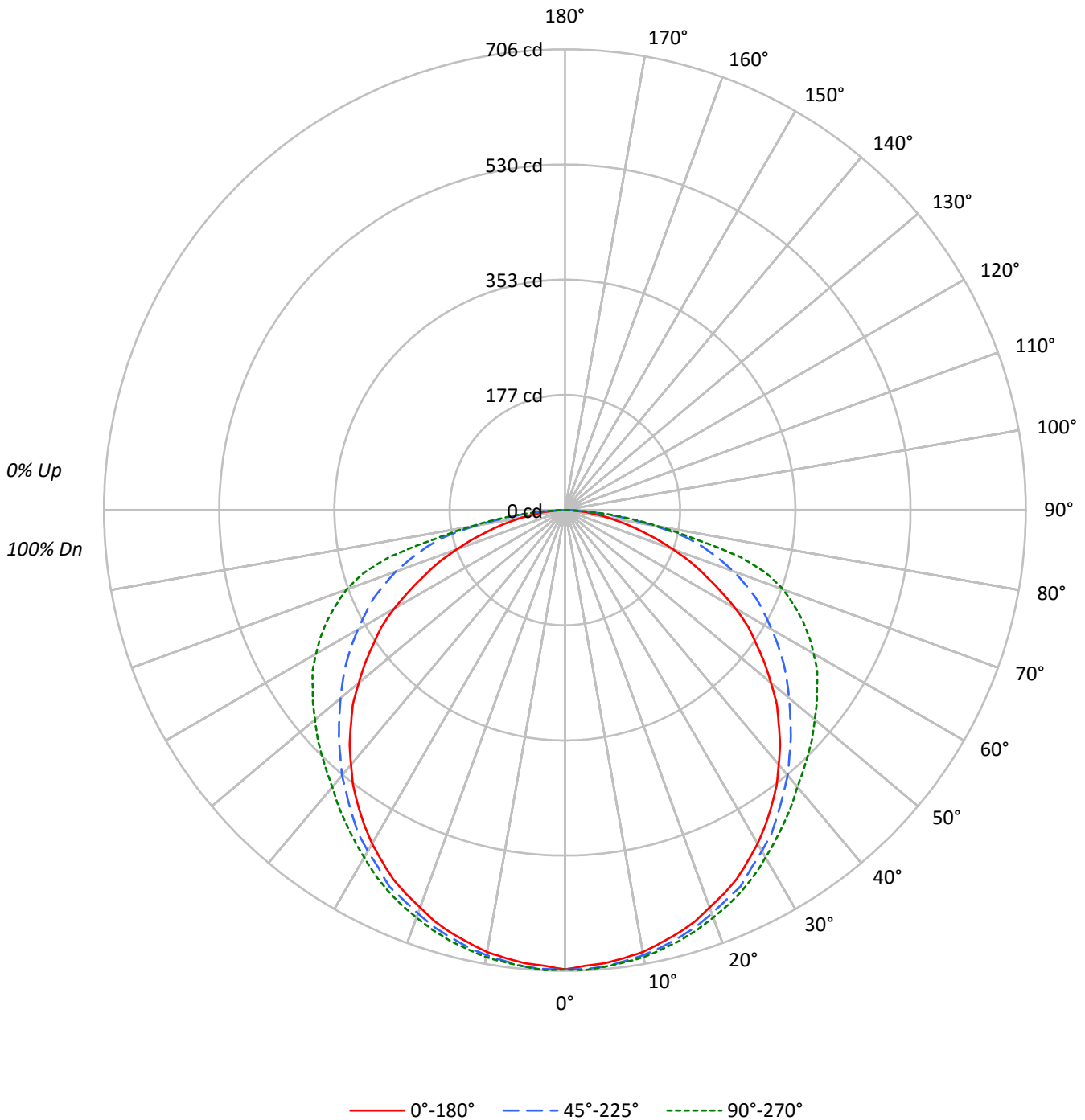
Input Watts (W): 32.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1894	1894	1894
5°	1884	1897	1897
10°	1879	1892	1901
15°	1869	1888	1901
20°	1855	1884	1903
25°	1850	1889	1909
30°	1834	1875	1911
35°	1814	1869	1922
40°	1789	1865	1946
45°	1763	1863	2007
50°	1725	1877	2091
55°	1678	1918	2212
60°	1624	1970	2369
65°	1512	2068	2561
70°	1388	2166	2802
75°	1216	2280	2897
80°	1048	2171	2273
85°	917	1578	1732



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.6	3.0
10°-20°	191.2	8.5
20°-30°	291.7	13.0
30°-40°	356.2	15.9
40°-50°	380.8	17.0
50°-60°	367.6	16.4
60°-70°	316.4	14.1
70°-80°	214.1	9.6
80°-90°	56.5	2.5
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°	549.5	24.5
0°-40°	905.6	40.4
0°-60°	1654.0	73.8
0°-90°	2241.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2241.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	704	704	704	704	704	
5°	697	699	702	702	702	66
15°	671	673	678	681	682	189
25°	623	626	636	640	643	287
35°	552	557	569	580	585	346
45°	463	472	490	514	528	358
55°	358	369	409	450	472	321
65°	237	260	325	376	402	236
75°	117	155	219	264	279	126
85°	30	41	51	53	56	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	703.9	703.9	703.9	703.9	703.9
2.5°	699.0	700.6	703.9	703.9	705.6
5°	697.3	699.0	702.3	702.3	702.3
7.5°	692.4	694.0	697.3	699.0	699.0
10°	687.5	689.1	692.4	694.0	695.7
12.5°	679.2	680.9	685.8	689.1	689.1
15°	671.0	672.6	677.6	680.9	682.5
17.5°	661.1	664.4	669.3	672.6	674.3
20°	647.9	651.2	657.8	662.7	664.4
22.5°	636.3	639.6	646.2	651.2	654.5
25°	623.2	626.5	636.3	639.6	642.9
27.5°	606.7	610.0	618.2	624.8	629.8
30°	590.2	593.5	603.4	611.6	614.9
32.5°	572.1	577.0	588.5	595.1	600.1
35°	552.3	557.2	568.8	580.3	585.2
37.5°	532.5	537.4	549.0	563.8	570.4
40°	509.4	516.0	530.8	550.6	553.9
42.5°	488.0	496.2	509.4	532.5	540.7
45°	463.2	471.5	489.6	514.4	527.5
47.5°	440.2	448.4	468.2	497.9	514.4
50°	412.1	423.7	448.4	483.0	499.5
52.5°	385.8	395.7	428.6	466.5	486.3
55°	357.7	369.3	408.8	450.1	471.5
57.5°	333.0	342.9	387.4	433.6	458.3
60°	301.7	314.9	366.0	415.4	440.2
62.5°	268.7	288.5	344.6	395.7	422.0
65°	237.4	260.5	324.8	375.9	402.2
67.5°	209.4	234.1	300.0	354.4	379.2
70°	176.4	207.7	275.3	328.1	356.1
72.5°	146.7	181.3	247.3	300.0	324.8
75°	117.0	155.0	219.3	263.8	278.6
77.5°	90.7	126.9	187.9	201.1	202.8
80°	67.6	100.6	140.1	141.8	146.7
82.5°	46.2	70.9	90.7	98.9	100.6
85°	29.7	41.2	51.1	52.8	56.1
87.5°	13.2	14.8	18.1	16.5	16.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)