

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: P308276

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-HRP-CP250-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: P308276
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: 22FCZ2-39HE-UNV-L82765-HRP-CP250-W2A-U-2700K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
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: 2347.0 lumens
Efficiency: N/A
Efficacy: 72.4 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

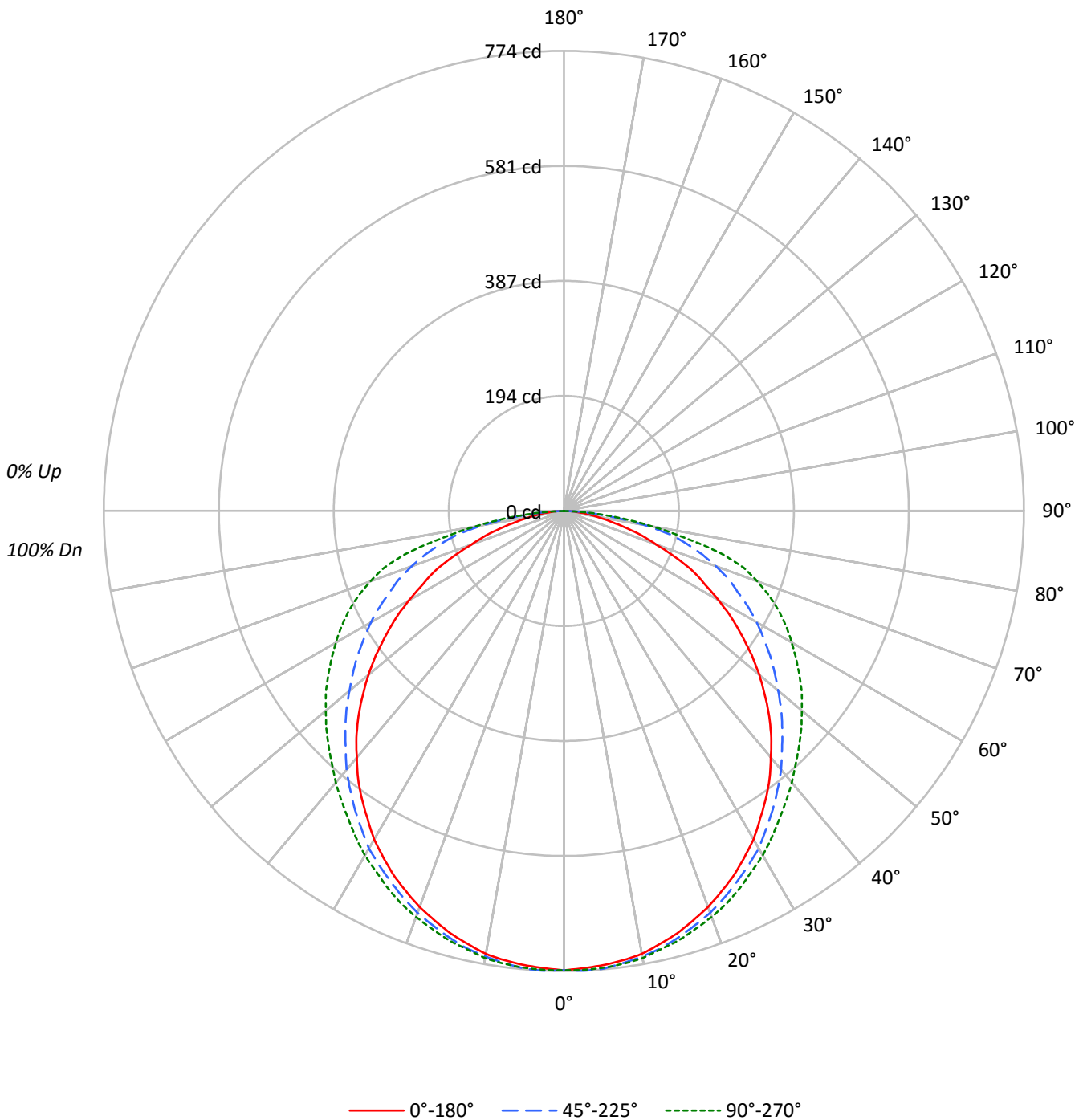
Input Watts (W): 32.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2080	2080	2080
5°	2072	2088	2084
10°	2067	2079	2088
15°	2050	2070	2083
20°	2031	2060	2082
25°	2009	2044	2079
30°	1983	2038	2079
35°	1945	2013	2077
40°	1904	1997	2096
45°	1859	1978	2130
50°	1798	1971	2188
55°	1716	1986	2271
60°	1617	2016	2383
65°	1527	2055	2545
70°	1304	2143	2725
75°	1093	2232	2832
80°	894	2157	2363
85°	778	1599	1738



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.2	3.1
10°-20°	209.5	8.9
20°-30°	317.5	13.5
30°-40°	383.4	16.3
40°-50°	402.9	17.2
50°-60°	379.1	16.2
60°-70°	316.1	13.5
70°-80°	209.4	8.9
80°-90°	55.8	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°	600.3	25.6
0°-40°	983.7	41.9
0°-60°	1765.7	75.2
0°-90°	2347.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2347.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	773	773	773	773	773	
5°	767	768	773	773	771	73
15°	736	739	743	746	748	207
25°	677	681	688	697	700	312
35°	592	598	613	626	632	370
45°	489	496	520	546	560	376
55°	366	382	423	466	484	327
65°	240	261	323	376	400	233
75°	105	147	215	259	272	114
85°	25	38	52	56	56	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	772.8	772.8	772.8	772.8	772.8
2.5°	769.9	771.4	774.3	774.3	772.8
5°	766.9	768.4	772.8	772.8	771.4
7.5°	762.5	764.0	766.9	769.9	768.4
10°	756.6	758.0	761.0	764.0	764.0
12.5°	746.2	747.7	753.6	755.1	755.1
15°	735.8	738.8	743.2	746.2	747.7
17.5°	722.5	725.5	731.4	737.3	737.3
20°	709.2	712.1	719.5	725.5	726.9
22.5°	692.9	697.3	704.7	712.1	715.1
25°	676.6	681.0	688.5	697.3	700.3
27.5°	657.4	661.8	672.2	682.5	684.0
30°	638.1	642.6	655.9	664.8	669.2
32.5°	614.4	620.3	633.7	647.0	651.4
35°	592.2	598.1	612.9	626.3	632.2
37.5°	568.5	574.4	590.7	607.0	614.4
40°	541.9	549.3	568.5	586.3	596.7
42.5°	516.7	524.1	543.4	567.0	577.4
45°	488.6	496.0	519.7	546.3	559.6
47.5°	459.0	467.8	496.0	528.6	541.9
50°	429.4	439.7	470.8	507.8	522.6
52.5°	398.3	411.6	447.1	487.1	504.9
55°	365.7	382.0	423.4	466.4	484.1
57.5°	334.6	349.4	398.3	444.2	463.4
60°	300.5	319.8	374.6	422.0	442.7
62.5°	268.0	288.7	349.4	399.7	422.0
65°	239.8	260.6	322.8	376.1	399.7
67.5°	202.8	231.0	300.5	350.9	374.6
70°	165.8	204.3	272.4	324.2	346.4
72.5°	137.7	174.7	244.3	296.1	316.8
75°	105.1	146.6	214.7	259.1	272.4
77.5°	78.5	121.4	183.6	205.8	207.3
80°	57.7	93.3	139.2	146.6	152.5
82.5°	40.0	65.1	90.3	99.2	102.2
85°	25.2	38.5	51.8	56.3	56.3
87.5°	13.3	14.8	17.8	17.8	17.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)