

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: P312515

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-HRP-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: P312515
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: 22FCZ2-34HE-UNV-L83050-HRP-CA08-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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: 2355.0 lumens
Efficiency: N/A
Efficacy: 85.6 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

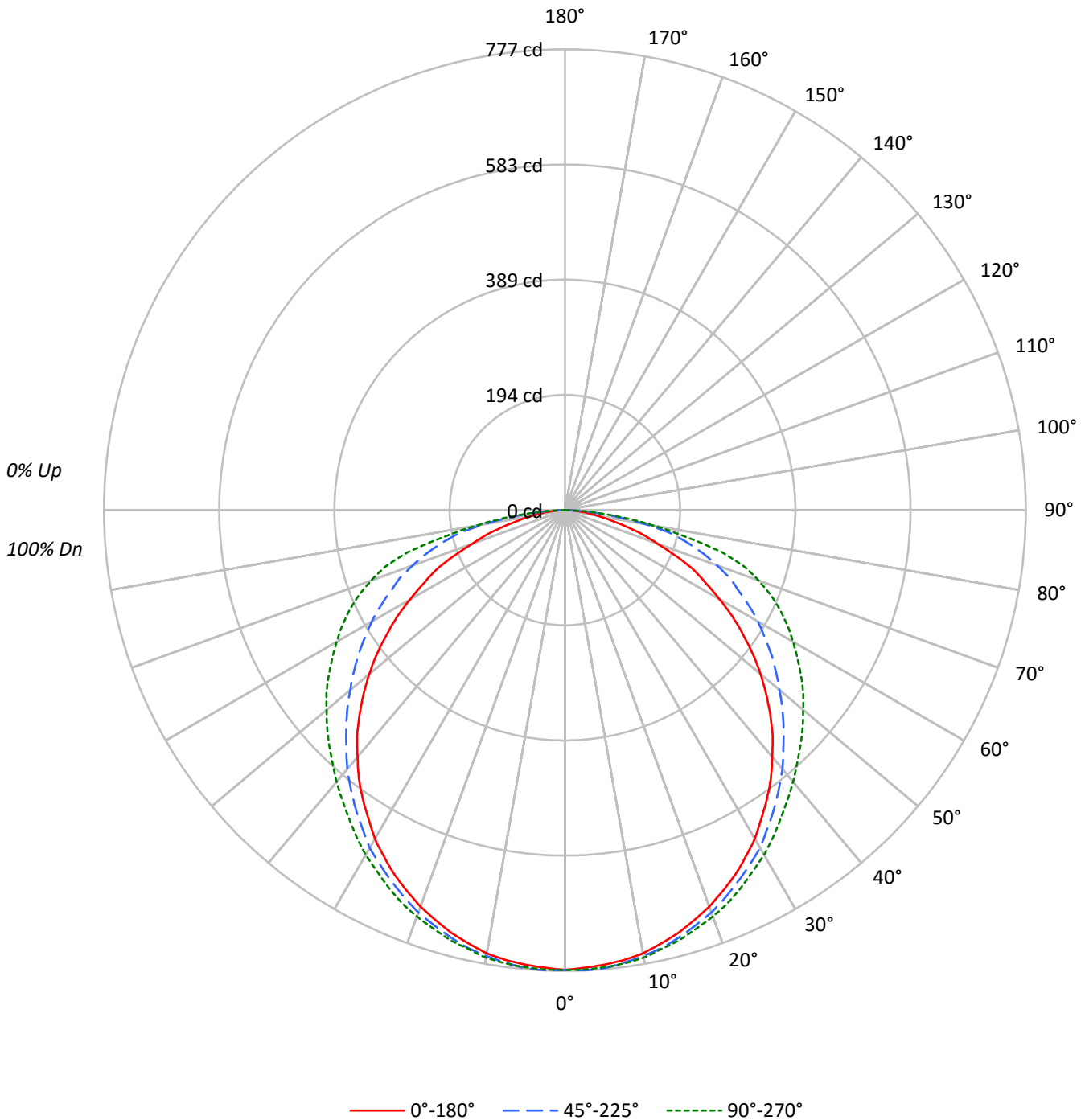
Input Watts (W): 27.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2087	2087	2087
5°	2079	2095	2091
10°	2074	2087	2095
15°	2057	2078	2090
20°	2038	2068	2089
25°	2016	2051	2086
30°	1990	2045	2087
35°	1952	2020	2084
40°	1910	2004	2103
45°	1866	1984	2137
50°	1804	1978	2195
55°	1721	1993	2279
60°	1623	2023	2391
65°	1533	2062	2554
70°	1309	2150	2735
75°	1097	2240	2842
80°	897	2163	2371
85°	781	1606	1744



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.5	3.1
10°-20°	210.2	8.9
20°-30°	318.6	13.5
30°-40°	384.7	16.3
40°-50°	404.3	17.2
50°-60°	380.4	16.2
60°-70°	317.2	13.5
70°-80°	210.1	8.9
80°-90°	56.0	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°	602.3	25.6
0°-40°	987.1	41.9
0°-60°	1771.7	75.2
0°-90°	2355.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2355.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	776	776	776	776	776	
5°	770	771	776	776	774	73
15°	738	741	746	749	750	208
25°	679	683	691	700	703	313
35°	594	600	615	628	634	372
45°	490	498	521	548	562	378
55°	367	383	425	468	486	328
65°	241	262	324	377	401	234
75°	106	147	215	260	273	114
85°	25	39	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°	775.5	775.5	775.5	775.5	775.5
2.5°	772.5	774.0	777.0	777.0	775.5
5°	769.5	771.0	775.5	775.5	774.0
7.5°	765.1	766.6	769.5	772.5	771.0
10°	759.1	760.6	763.6	766.6	766.6
12.5°	748.7	750.2	756.2	757.6	757.6
15°	738.3	741.3	745.8	748.7	750.2
17.5°	725.0	727.9	733.9	739.8	739.8
20°	711.6	714.6	722.0	727.9	729.4
22.5°	695.3	699.7	707.1	714.6	717.5
25°	678.9	683.4	690.8	699.7	702.7
27.5°	659.6	664.1	674.5	684.9	686.3
30°	640.3	644.7	658.1	667.0	671.5
32.5°	616.5	622.5	635.8	649.2	653.7
35°	594.2	600.2	615.0	628.4	634.3
37.5°	570.5	576.4	592.7	609.1	616.5
40°	543.7	551.2	570.5	588.3	598.7
42.5°	518.5	525.9	545.2	569.0	579.4
45°	490.2	497.7	521.4	548.2	561.6
47.5°	460.5	469.4	497.7	530.4	543.7
50°	430.8	441.2	472.4	509.6	524.4
52.5°	399.6	413.0	448.6	488.8	506.6
55°	366.9	383.3	424.9	468.0	485.8
57.5°	335.7	350.6	399.6	445.7	465.0
60°	301.6	320.9	375.9	423.4	444.2
62.5°	268.9	289.7	350.6	401.1	423.4
65°	240.7	261.5	323.9	377.3	401.1
67.5°	203.5	231.8	301.6	352.1	375.9
70°	166.4	205.0	273.3	325.3	347.6
72.5°	138.2	175.3	245.1	297.1	317.9
75°	105.5	147.1	215.4	260.0	273.3
77.5°	78.7	121.8	184.2	206.5	208.0
80°	57.9	93.6	139.6	147.1	153.0
82.5°	40.1	65.4	90.6	99.5	102.5
85°	25.3	38.6	52.0	56.5	56.5
87.5°	13.4	14.9	17.8	17.8	17.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)