

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: P311960

Luminaire Tested: **14FCZ2-39-UNV-L83050-HRP-CP250-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: P311960
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-39-UNV-L83050-HRP-CP250-W2A-U-3000K
Description: 1'X4' 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: 2473.0 lumens
Efficiency: N/A
Efficacy: 74.5 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

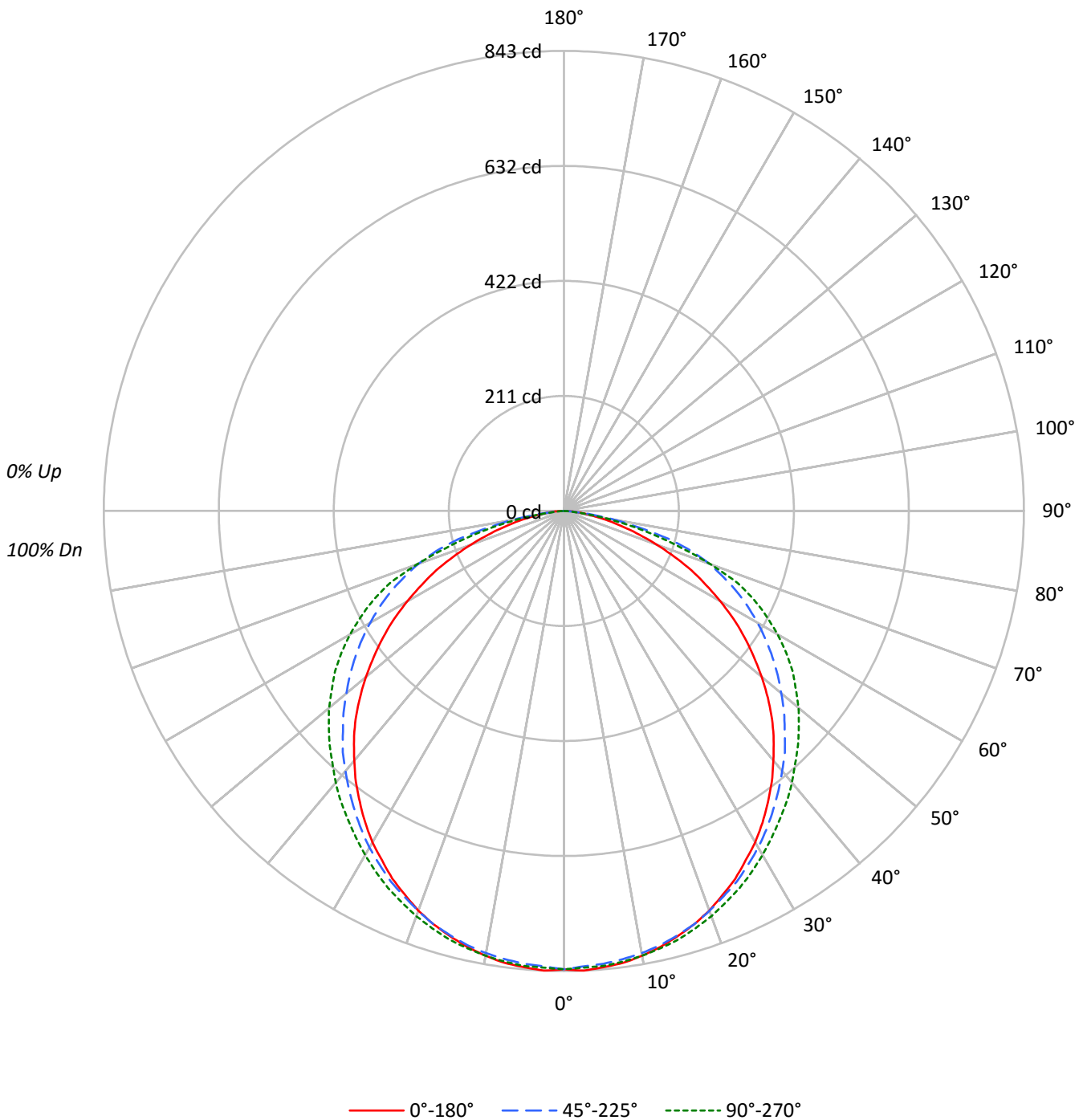
Input Watts (W): 33.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2260	2260	2260
5°	2267	2250	2260
10°	2261	2248	2261
15°	2247	2242	2264
20°	2231	2234	2263
25°	2207	2226	2263
30°	2179	2213	2262
35°	2141	2197	2266
40°	2098	2185	2284
45°	2054	2178	2308
50°	1983	2178	2351
55°	1897	2189	2401
60°	1783	2206	2432
65°	1644	2228	2446
70°	1432	2233	2252
75°	1180	2078	1820
80°	928	1494	1216
85°	719	577	287



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.5	3.2
10°-20°	228.1	9.2
20°-30°	346.5	14.0
30°-40°	419.8	17.0
40°-50°	442.4	17.9
50°-60°	413.0	16.7
60°-70°	330.0	13.3
70°-80°	181.6	7.3
80°-90°	32.1	1.3
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°	654.1	26.5
0°-40°	1073.9	43.4
0°-60°	1929.3	78.0
0°-90°	2473.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2473.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	840	840	840	840	840	
5°	839	837	833	838	837	80
15°	806	806	805	813	813	228
25°	743	745	750	760	762	342
35°	652	658	669	686	690	408
45°	540	550	572	598	607	415
55°	404	425	467	499	512	361
65°	258	291	350	379	384	254
75°	114	162	200	180	175	122
85°	23	30	19	12	9	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	839.8	839.8	839.8	839.8	839.8
2.5°	843.0	840.6	835.2	839.8	837.5
5°	839.1	836.7	832.8	838.3	836.7
7.5°	835.2	832.1	828.2	834.4	832.8
10°	827.4	825.1	822.7	828.2	827.4
12.5°	818.1	817.3	815.0	821.2	820.4
15°	806.4	806.4	804.8	812.6	812.6
17.5°	794.0	793.2	794.0	802.5	801.7
20°	779.2	779.2	780.0	790.1	790.1
22.5°	761.3	762.1	764.4	776.9	776.1
25°	743.4	745.0	749.6	760.5	762.1
27.5°	721.6	725.5	731.0	744.2	745.7
30°	701.4	703.8	712.3	724.8	727.9
32.5°	677.3	682.0	691.3	705.3	709.2
35°	651.7	657.9	668.8	685.9	689.8
37.5°	626.0	631.4	646.2	664.1	671.1
40°	597.2	606.6	622.1	642.3	650.1
42.5°	569.2	578.6	599.6	620.6	627.5
45°	539.7	549.8	572.3	598.0	606.6
47.5°	507.0	518.7	547.5	574.7	584.0
50°	473.6	488.4	520.2	550.6	561.5
52.5°	438.6	457.2	493.8	525.7	535.8
55°	404.4	424.6	466.6	499.2	511.7
57.5°	369.4	391.1	438.6	475.9	482.9
60°	331.3	357.7	409.8	442.5	451.8
62.5°	293.9	324.3	380.3	411.4	419.1
65°	258.2	290.8	349.9	378.7	384.2
67.5°	219.3	258.2	316.5	342.9	344.5
70°	182.0	227.1	283.8	296.3	286.2
72.5°	145.4	193.6	245.7	235.6	227.1
75°	113.5	162.5	199.9	179.6	175.0
77.5°	84.0	133.0	143.1	132.2	123.6
80°	59.9	105.0	96.4	82.4	78.5
82.5°	41.2	66.1	52.9	41.2	35.8
85°	23.3	29.6	18.7	11.7	9.3
87.5°	10.1	7.0	3.9	3.1	3.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)