

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: P312517

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-HRP-CA08-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: P312517
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-4000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC 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: 2617.0 lumens
Efficiency: N/A
Efficacy: 92.8 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

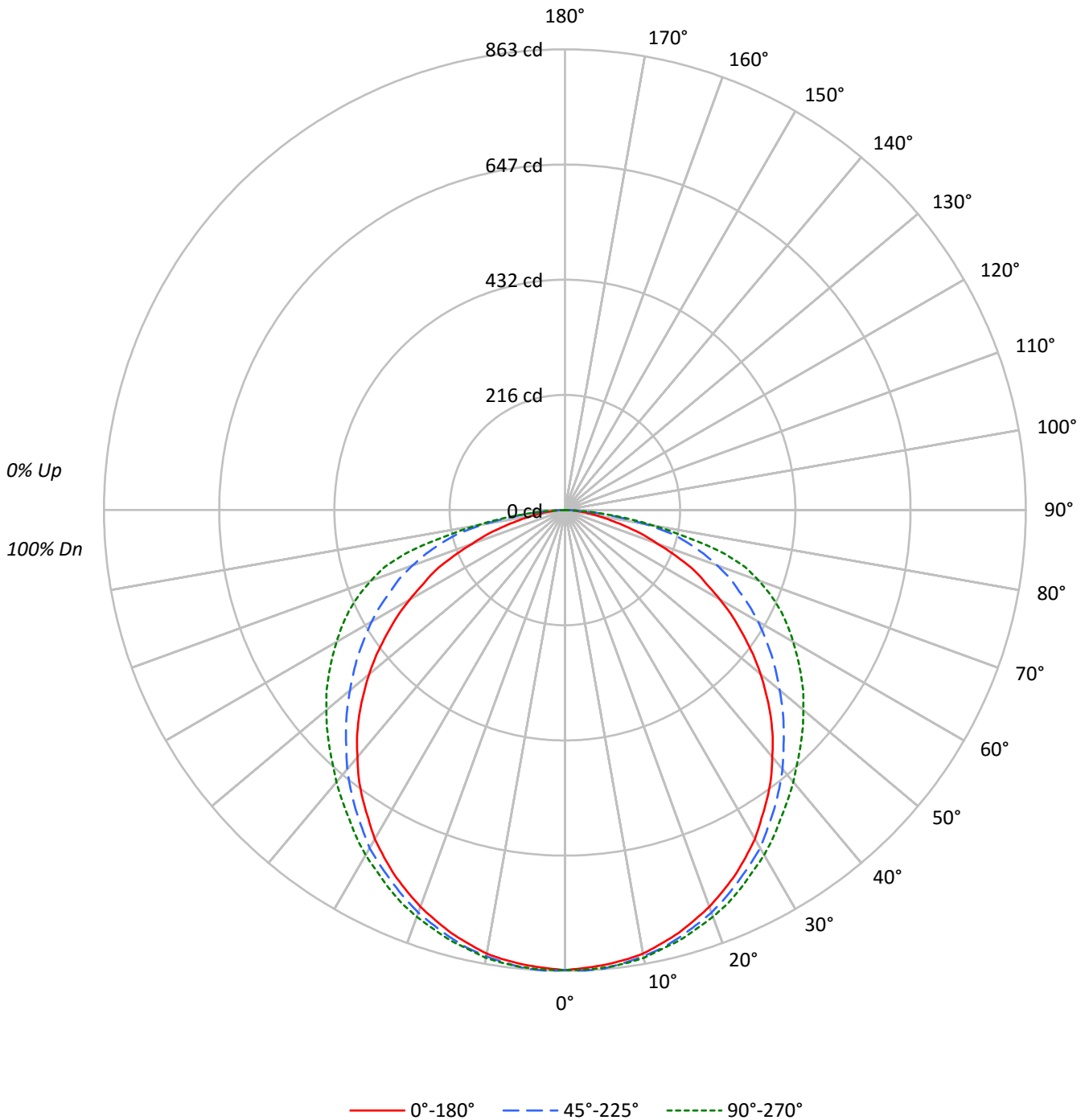
Input Watts (W): 28.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2319	2319	2319
5°	2310	2328	2323
10°	2305	2319	2328
15°	2286	2309	2323
20°	2265	2298	2321
25°	2240	2279	2319
30°	2211	2272	2319
35°	2169	2245	2316
40°	2122	2227	2337
45°	2073	2205	2375
50°	2004	2198	2440
55°	1913	2215	2533
60°	1803	2248	2657
65°	1703	2292	2838
70°	1455	2390	3039
75°	1219	2489	3159
80°	998	2405	2634
85°	868	1785	1936



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.7	3.1
10°-20°	233.6	8.9
20°-30°	354.1	13.5
30°-40°	427.5	16.3
40°-50°	449.2	17.2
50°-60°	422.7	16.2
60°-70°	352.4	13.5
70°-80°	233.5	8.9
80°-90°	62.2	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°	669.4	25.6
0°-40°	1096.9	41.9
0°-60°	1968.8	75.2
0°-90°	2617.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2617.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	862	862	862	862	862	
5°	855	857	862	862	860	81
15°	820	824	829	832	834	231
25°	754	759	768	778	781	347
35°	660	667	684	698	705	413
45°	545	553	580	609	624	420
55°	408	426	472	520	540	365
65°	267	291	360	419	446	260
75°	117	163	239	289	304	127
85°	28	43	58	63	63	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	861.7	861.7	861.7	861.7	861.7
2.5°	858.4	860.1	863.4	863.4	861.7
5°	855.1	856.8	861.7	861.7	860.1
7.5°	850.2	851.8	855.1	858.4	856.8
10°	843.6	845.2	848.5	851.8	851.8
12.5°	832.0	833.7	840.3	841.9	841.9
15°	820.5	823.8	828.7	832.0	833.7
17.5°	805.6	808.9	815.5	822.1	822.1
20°	790.8	794.1	802.3	808.9	810.6
22.5°	772.6	777.6	785.8	794.1	797.4
25°	754.4	759.4	767.6	777.6	780.9
27.5°	733.0	737.9	749.5	761.0	762.7
30°	711.5	716.5	731.3	741.2	746.2
32.5°	685.1	691.7	706.6	721.4	726.4
35°	660.3	666.9	683.5	698.3	704.9
37.5°	633.9	640.5	658.7	676.9	685.1
40°	604.2	612.5	633.9	653.7	665.3
42.5°	576.1	584.4	605.9	632.3	643.8
45°	544.8	553.0	579.5	609.2	624.0
47.5°	511.8	521.7	553.0	589.4	604.2
50°	478.7	490.3	525.0	566.2	582.8
52.5°	444.1	458.9	498.6	543.1	562.9
55°	407.8	425.9	472.1	520.0	539.8
57.5°	373.1	389.6	444.1	495.3	516.7
60°	335.1	356.6	417.7	470.5	493.6
62.5°	298.8	321.9	389.6	445.7	470.5
65°	267.4	290.6	359.9	419.3	445.7
67.5°	226.2	257.5	335.1	391.3	417.7
70°	184.9	227.8	303.8	361.5	386.3
72.5°	153.5	194.8	272.4	330.2	353.3
75°	117.2	163.4	239.4	288.9	303.8
77.5°	87.5	135.4	204.7	229.5	231.1
80°	64.4	104.0	155.2	163.4	170.0
82.5°	44.6	72.6	100.7	110.6	113.9
85°	28.1	42.9	57.8	62.7	62.7
87.5°	14.9	16.5	19.8	19.8	19.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)