

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: P312537

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-HRP-CP250-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: P312537
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-CP250-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB 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: 2428.0 lumens
Efficiency: N/A
Efficacy: 86.1 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

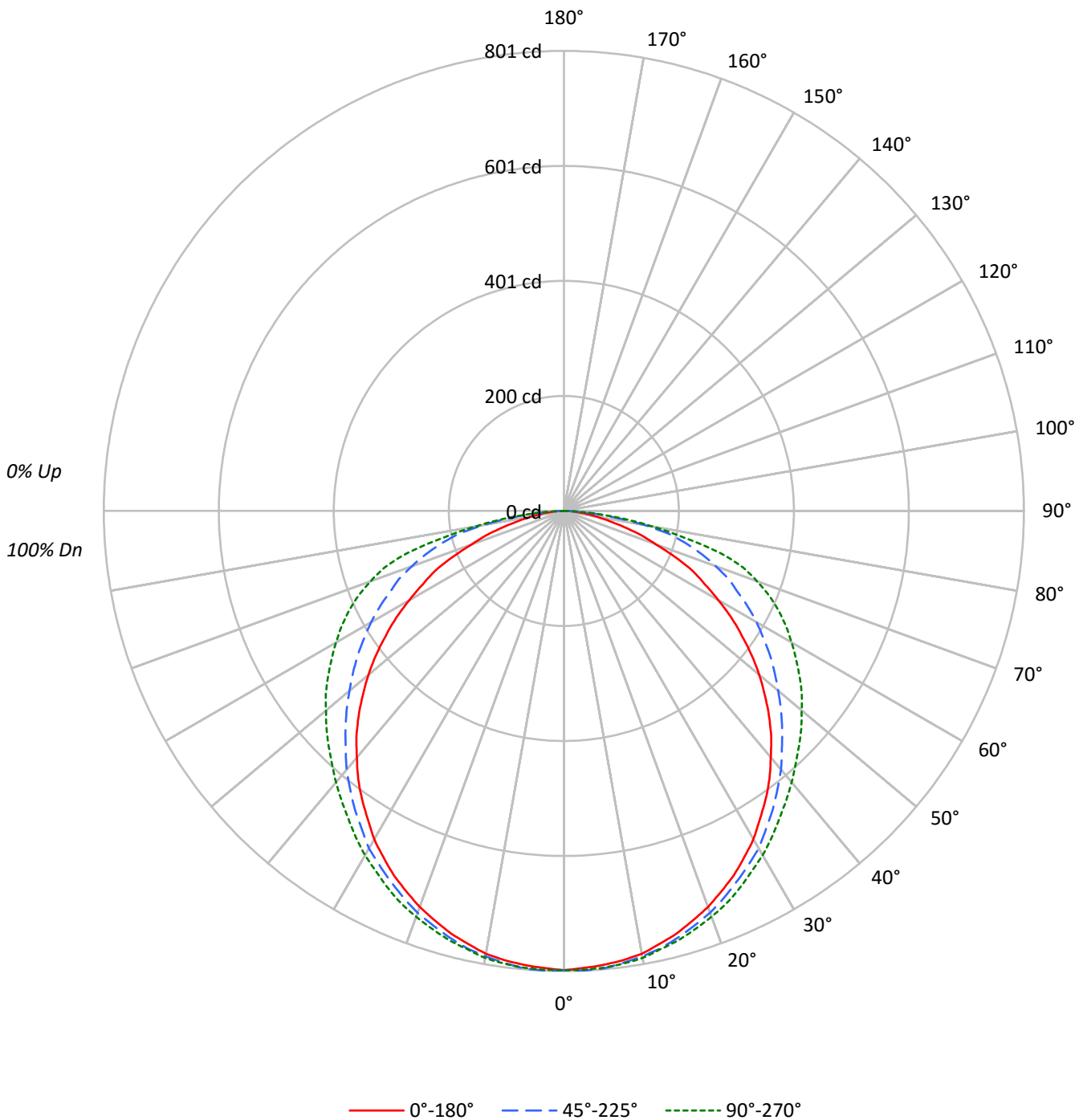
Input Watts (W): 28.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2151	2151	2151
5°	2143	2160	2156
10°	2139	2151	2159
15°	2121	2142	2155
20°	2101	2132	2153
25°	2078	2115	2151
30°	2051	2108	2151
35°	2013	2083	2148
40°	1969	2066	2168
45°	1923	2046	2203
50°	1860	2039	2264
55°	1775	2055	2350
60°	1673	2086	2465
65°	1580	2126	2633
70°	1349	2217	2820
75°	1130	2309	2930
80°	925	2232	2445
85°	803	1655	1797



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.8	3.1
10°-20°	216.8	8.9
20°-30°	328.5	13.5
30°-40°	396.7	16.3
40°-50°	416.8	17.2
50°-60°	392.2	16.2
60°-70°	327.0	13.5
70°-80°	216.6	8.9
80°-90°	57.7	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°	621.0	25.6
0°-40°	1017.7	41.9
0°-60°	1826.6	75.2
0°-90°	2428.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2428.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	800	800	800	800	800	
5°	793	795	800	800	798	75
15°	761	764	769	772	774	215
25°	700	705	712	721	724	322
35°	613	619	634	648	654	383
45°	505	513	538	565	579	389
55°	378	395	438	482	501	338
65°	248	270	334	389	414	241
75°	109	152	222	268	282	118
85°	26	40	54	58	58	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	799.5	799.5	799.5	799.5	799.5
2.5°	796.4	798.0	801.0	801.0	799.5
5°	793.4	794.9	799.5	799.5	798.0
7.5°	788.8	790.3	793.4	796.4	794.9
10°	782.7	784.2	787.3	790.3	790.3
12.5°	771.9	773.5	779.6	781.1	781.1
15°	761.2	764.3	768.9	771.9	773.5
17.5°	747.4	750.5	756.6	762.8	762.8
20°	733.7	736.7	744.4	750.5	752.0
22.5°	716.8	721.4	729.1	736.7	739.8
25°	700.0	704.6	712.2	721.4	724.5
27.5°	680.0	684.6	695.4	706.1	707.6
30°	660.1	664.7	678.5	687.7	692.3
32.5°	635.6	641.8	655.5	669.3	673.9
35°	612.7	618.8	634.1	647.9	654.0
37.5°	588.1	594.3	611.1	628.0	635.6
40°	560.6	568.2	588.1	606.5	617.2
42.5°	534.5	542.2	562.1	586.6	597.3
45°	505.4	513.1	537.6	565.2	579.0
47.5°	474.8	484.0	513.1	546.8	560.6
50°	444.2	454.9	487.1	525.4	540.7
52.5°	412.0	425.8	462.6	503.9	522.3
55°	378.3	395.2	438.0	482.5	500.8
57.5°	346.1	361.5	412.0	459.5	479.4
60°	310.9	330.8	387.5	436.5	458.0
62.5°	277.2	298.7	361.5	413.5	436.5
65°	248.1	269.6	333.9	389.0	413.5
67.5°	209.8	238.9	310.9	363.0	387.5
70°	171.5	211.4	281.8	335.4	358.4
72.5°	142.4	180.7	252.7	306.3	327.8
75°	108.7	151.6	222.1	268.0	281.8
77.5°	81.2	125.6	189.9	212.9	214.4
80°	59.7	96.5	144.0	151.6	157.8
82.5°	41.4	67.4	93.4	102.6	105.7
85°	26.0	39.8	53.6	58.2	58.2
87.5°	13.8	15.3	18.4	18.4	18.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)