

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: P312687

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-RDP-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: P312687
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
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-RDP-CP250-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 2019.0 lumens
Efficiency: N/A
Efficacy: 71.6 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

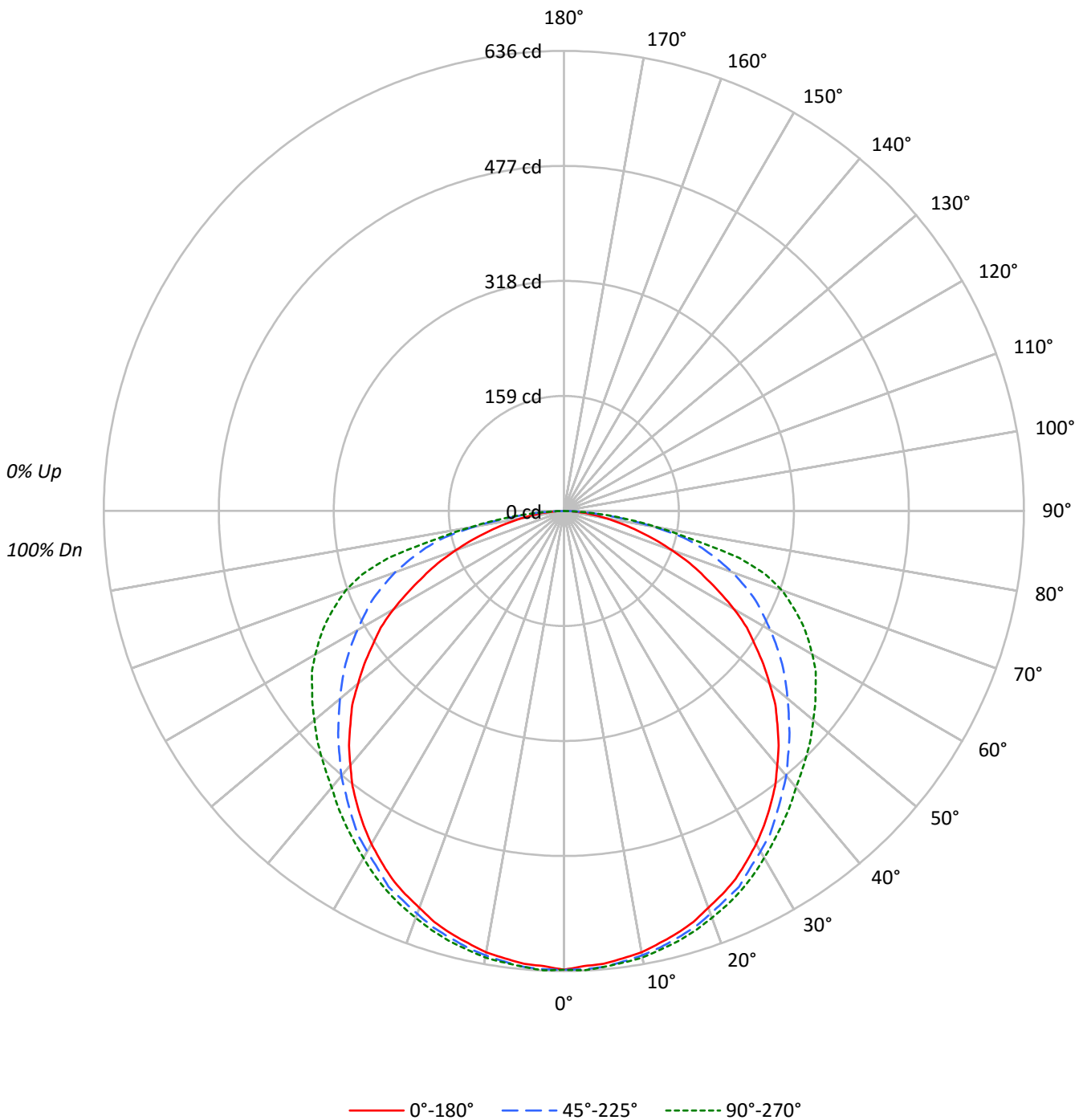
Input Watts (W): 28.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1707	1707	1707
5°	1697	1709	1709
10°	1693	1705	1713
15°	1684	1701	1713
20°	1672	1697	1714
25°	1667	1702	1720
30°	1652	1689	1721
35°	1635	1683	1732
40°	1612	1680	1753
45°	1588	1679	1809
50°	1554	1691	1884
55°	1512	1728	1993
60°	1463	1774	2134
65°	1362	1863	2308
70°	1250	1951	2524
75°	1097	2053	2610
80°	944	1956	2049
85°	824	1420	1559



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.0	3.0
10°-20°	172.2	8.5
20°-30°	262.8	13.0
30°-40°	320.9	15.9
40°-50°	343.1	17.0
50°-60°	331.2	16.4
60°-70°	285.1	14.1
70°-80°	192.9	9.6
80°-90°	50.9	2.5
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°	495.0	24.5
0°-40°	815.9	40.4
0°-60°	1490.2	73.8
0°-90°	2019.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2019.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	634	634	634	634	634	
5°	628	630	633	633	633	60
15°	604	606	610	613	615	171
25°	561	564	573	576	579	258
35°	498	502	512	523	527	311
45°	417	425	441	463	475	322
55°	322	333	368	406	425	289
65°	214	235	293	339	362	213
75°	106	140	198	238	251	113
85°	27	37	46	48	50	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	634.2	634.2	634.2	634.2	634.2
2.5°	629.7	631.2	634.2	634.2	635.7
5°	628.3	629.7	632.7	632.7	632.7
7.5°	623.8	625.3	628.3	629.7	629.7
10°	619.4	620.8	623.8	625.3	626.8
12.5°	611.9	613.4	617.9	620.8	620.8
15°	604.5	606.0	610.4	613.4	614.9
17.5°	595.6	598.6	603.0	606.0	607.5
20°	583.7	586.7	592.6	597.1	598.6
22.5°	573.3	576.3	582.2	586.7	589.6
25°	561.4	564.4	573.3	576.3	579.2
27.5°	546.6	549.5	557.0	562.9	567.4
30°	531.7	534.7	543.6	551.0	554.0
32.5°	515.4	519.8	530.2	536.2	540.6
35°	497.6	502.0	512.4	522.8	527.3
37.5°	479.7	484.2	494.6	508.0	513.9
40°	458.9	464.9	478.3	496.1	499.0
42.5°	439.6	447.1	458.9	479.7	487.2
45°	417.4	424.8	441.1	463.4	475.3
47.5°	396.6	404.0	421.8	448.5	463.4
50°	371.3	381.7	404.0	435.2	450.0
52.5°	347.5	356.5	386.2	420.3	438.1
55°	322.3	332.7	368.3	405.5	424.8
57.5°	300.0	308.9	349.0	390.6	412.9
60°	271.8	283.7	329.7	374.3	396.6
62.5°	242.1	259.9	310.4	356.5	380.2
65°	213.9	234.7	292.6	338.6	362.4
67.5°	188.6	210.9	270.3	319.3	341.6
70°	158.9	187.1	248.0	295.6	320.8
72.5°	132.2	163.4	222.8	270.3	292.6
75°	105.5	139.6	197.5	237.6	251.0
77.5°	81.7	114.4	169.3	181.2	182.7
80°	60.9	90.6	126.2	127.7	132.2
82.5°	41.6	63.9	81.7	89.1	90.6
85°	26.7	37.1	46.0	47.5	50.5
87.5°	11.9	13.4	16.3	14.9	14.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)