

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: P312680

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-RDP-CP187-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: P312680
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-CP187-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" 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: 1832.0 lumens
Efficiency: N/A
Efficacy: 66.6 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

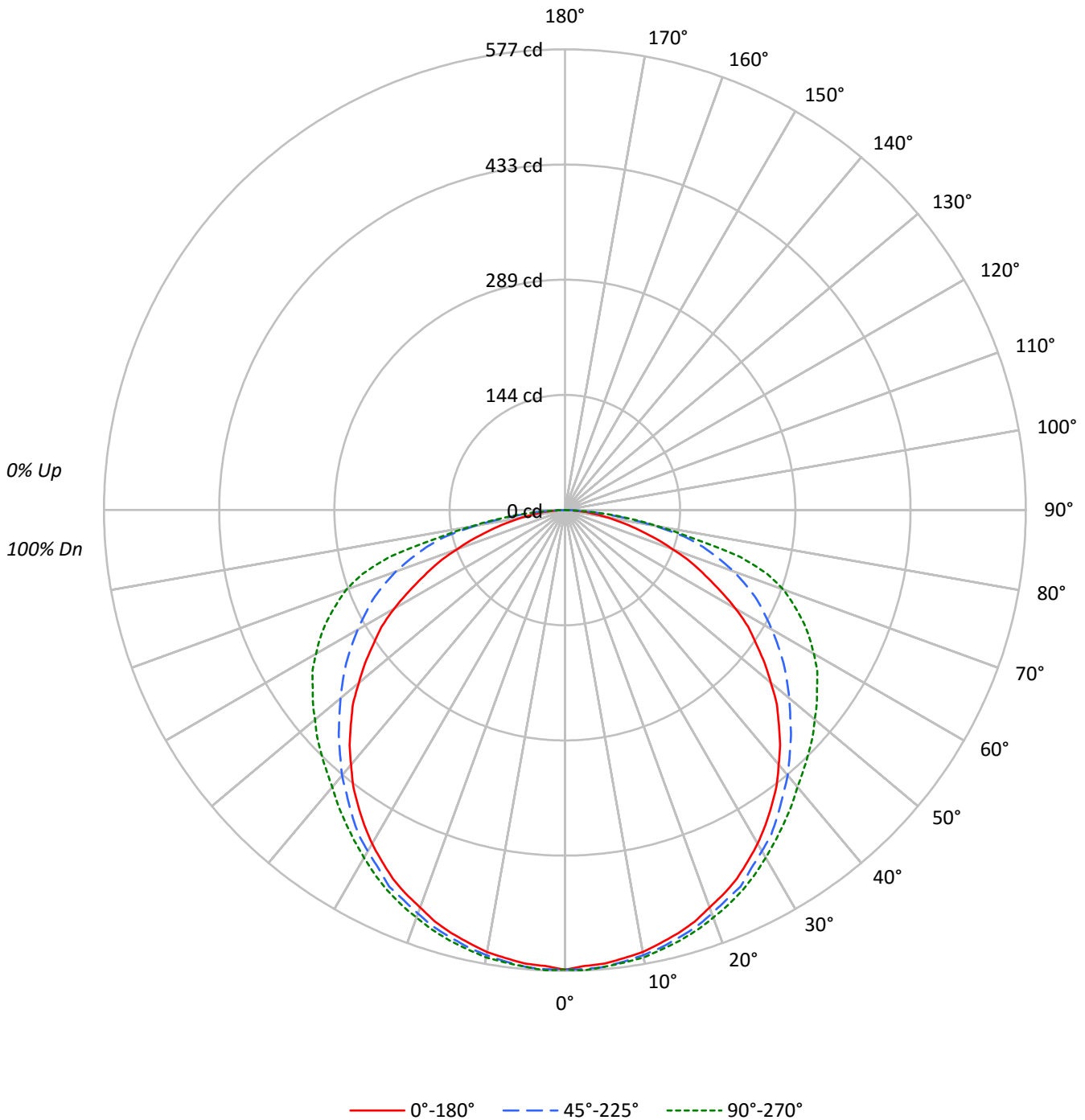
Input Watts (W): 27.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1549	1549	1549
5°	1540	1551	1551
10°	1536	1547	1554
15°	1528	1543	1554
20°	1517	1540	1555
25°	1512	1545	1561
30°	1499	1533	1562
35°	1483	1528	1572
40°	1463	1525	1591
45°	1441	1523	1641
50°	1410	1535	1709
55°	1372	1568	1808
60°	1327	1610	1936
65°	1236	1691	2094
70°	1135	1771	2290
75°	995	1863	2368
80°	857	1776	1858
85°	750	1291	1414



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.4	3.0
10°-20°	156.3	8.5
20°-30°	238.5	13.0
30°-40°	291.2	15.9
40°-50°	311.3	17.0
50°-60°	300.5	16.4
60°-70°	258.7	14.1
70°-80°	175.0	9.6
80°-90°	46.2	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°	449.2	24.5
0°-40°	740.3	40.4
0°-60°	1352.1	73.8
0°-90°	1832.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1832.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	576	576	576	576	576	
5°	570	571	574	574	574	54
15°	548	550	554	557	558	155
25°	509	512	520	523	526	234
35°	452	456	465	474	478	282
45°	379	385	400	420	431	292
55°	292	302	334	368	385	262
65°	194	213	266	307	329	193
75°	96	127	179	216	228	103
85°	24	34	42	43	46	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	575.5	575.5	575.5	575.5	575.5
2.5°	571.4	572.8	575.5	575.5	576.8
5°	570.1	571.4	574.1	574.1	574.1
7.5°	566.0	567.4	570.1	571.4	571.4
10°	562.0	563.3	566.0	567.4	568.7
12.5°	555.2	556.6	560.6	563.3	563.3
15°	548.5	549.9	553.9	556.6	557.9
17.5°	540.4	543.1	547.2	549.9	551.2
20°	529.6	532.3	537.7	541.8	543.1
22.5°	520.2	522.9	528.3	532.3	535.0
25°	509.4	512.1	520.2	522.9	525.6
27.5°	495.9	498.6	505.4	510.8	514.8
30°	482.5	485.2	493.3	500.0	502.7
32.5°	467.6	471.7	481.1	486.5	490.6
35°	451.5	455.5	465.0	474.4	478.4
37.5°	435.3	439.3	448.8	460.9	466.3
40°	416.4	421.8	434.0	450.1	452.8
42.5°	398.9	405.7	416.4	435.3	442.0
45°	378.7	385.4	400.3	420.5	431.3
47.5°	359.8	366.6	382.7	407.0	420.5
50°	336.9	346.4	366.6	394.9	408.3
52.5°	315.4	323.4	350.4	381.4	397.6
55°	292.4	301.9	334.2	367.9	385.4
57.5°	272.2	280.3	316.7	354.4	374.7
60°	246.6	257.4	299.2	339.6	359.8
62.5°	219.7	235.8	281.7	323.4	345.0
65°	194.1	212.9	265.5	307.3	328.8
67.5°	171.2	191.4	245.3	289.8	310.0
70°	144.2	169.8	225.1	268.2	291.1
72.5°	119.9	148.2	202.2	245.3	265.5
75°	95.7	126.7	179.2	215.6	227.8
77.5°	74.1	103.8	153.6	164.4	165.8
80°	55.3	82.2	114.6	115.9	119.9
82.5°	37.7	58.0	74.1	80.9	82.2
85°	24.3	33.7	41.8	43.1	45.8
87.5°	10.8	12.1	14.8	13.5	13.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)