

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: P308496

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-RDP-CP187-W2A-U-4500K**

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: P308496
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-L82765-RDP-CP187-W2A-U-4500K
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: 1969.0 lumens
Efficiency: N/A
Efficacy: 70.1 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

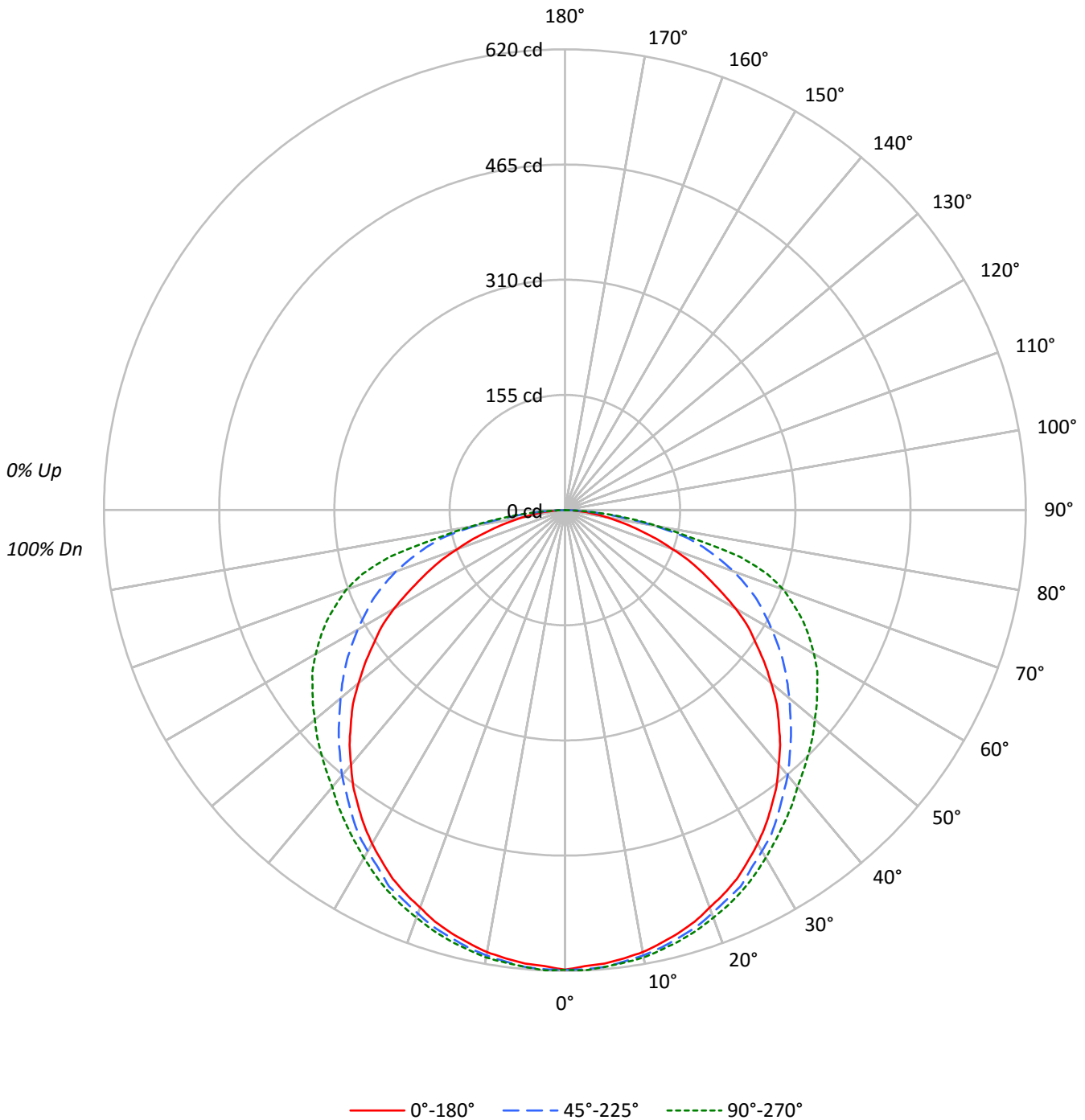
Input Watts (W): 28.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	108	103	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82					82			
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67					67			
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55					55			
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47					47			
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40					40			
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35					35			
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31					31			
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27					27			
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24					24			
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22					22			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1664	1664	1664
5°	1655	1667	1667
10°	1650	1662	1670
15°	1642	1658	1671
20°	1630	1655	1672
25°	1626	1660	1677
30°	1611	1647	1679
35°	1594	1642	1689
40°	1572	1638	1710
45°	1549	1637	1764
50°	1516	1649	1837
55°	1475	1685	1944
60°	1427	1731	2081
65°	1328	1817	2250
70°	1220	1903	2462
75°	1069	2002	2545
80°	921	1908	1998
85°	806	1386	1519



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.5	3.0
10°-20°	168.0	8.5
20°-30°	256.3	13.0
30°-40°	312.9	15.9
40°-50°	334.6	17.0
50°-60°	323.0	16.4
60°-70°	278.0	14.1
70°-80°	188.1	9.6
80°-90°	49.6	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°	482.8	24.5
0°-40°	795.7	40.4
0°-60°	1453.3	73.8
0°-90°	1969.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1969.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	618	618	618	618	618	
5°	613	614	617	617	617	58
15°	590	591	595	598	600	166
25°	548	550	559	562	565	252
35°	485	490	500	510	514	304
45°	407	414	430	452	464	314
55°	314	324	359	395	414	282
65°	209	229	285	330	353	207
75°	103	136	193	232	245	110
85°	26	36	45	46	49	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	618.5	618.5	618.5	618.5	618.5
2.5°	614.2	615.6	618.5	618.5	619.9
5°	612.7	614.2	617.0	617.0	617.0
7.5°	608.4	609.8	612.7	614.2	614.2
10°	604.0	605.5	608.4	609.8	611.3
12.5°	596.8	598.2	602.6	605.5	605.5
15°	589.5	591.0	595.3	598.2	599.7
17.5°	580.8	583.7	588.1	591.0	592.4
20°	569.2	572.1	577.9	582.3	583.7
22.5°	559.1	562.0	567.8	572.1	575.0
25°	547.5	550.4	559.1	562.0	564.9
27.5°	533.0	535.9	543.2	549.0	553.3
30°	518.6	521.4	530.1	537.4	540.3
32.5°	502.6	507.0	517.1	522.9	527.2
35°	485.2	489.6	499.7	509.9	514.2
37.5°	467.9	472.2	482.3	495.4	501.2
40°	447.6	453.4	466.4	483.8	486.7
42.5°	428.7	436.0	447.6	467.9	475.1
45°	407.0	414.3	430.2	451.9	463.5
47.5°	386.7	394.0	411.4	437.4	451.9
50°	362.1	372.3	394.0	424.4	438.9
52.5°	338.9	347.6	376.6	409.9	427.3
55°	314.3	324.5	359.2	395.4	414.3
57.5°	292.6	301.3	340.4	380.9	402.7
60°	265.1	276.7	321.6	365.0	386.7
62.5°	236.1	253.5	302.7	347.6	370.8
65°	208.6	228.9	285.3	330.3	353.4
67.5°	184.0	205.7	263.6	311.4	333.1
70°	155.0	182.5	241.9	288.2	312.9
72.5°	128.9	159.3	217.3	263.6	285.3
75°	102.8	136.2	192.6	231.8	244.8
77.5°	79.7	111.5	165.1	176.7	178.2
80°	59.4	88.4	123.1	124.6	128.9
82.5°	40.6	62.3	79.7	86.9	88.4
85°	26.1	36.2	44.9	46.4	49.2
87.5°	11.6	13.0	15.9	14.5	14.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)