

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: P308181

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-HRP-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: P308181
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: 22FCZ2-29HE-UNV-L82765-HRP-CP187-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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: 1895.0 lumens
Efficiency: N/A
Efficacy: 83.1 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

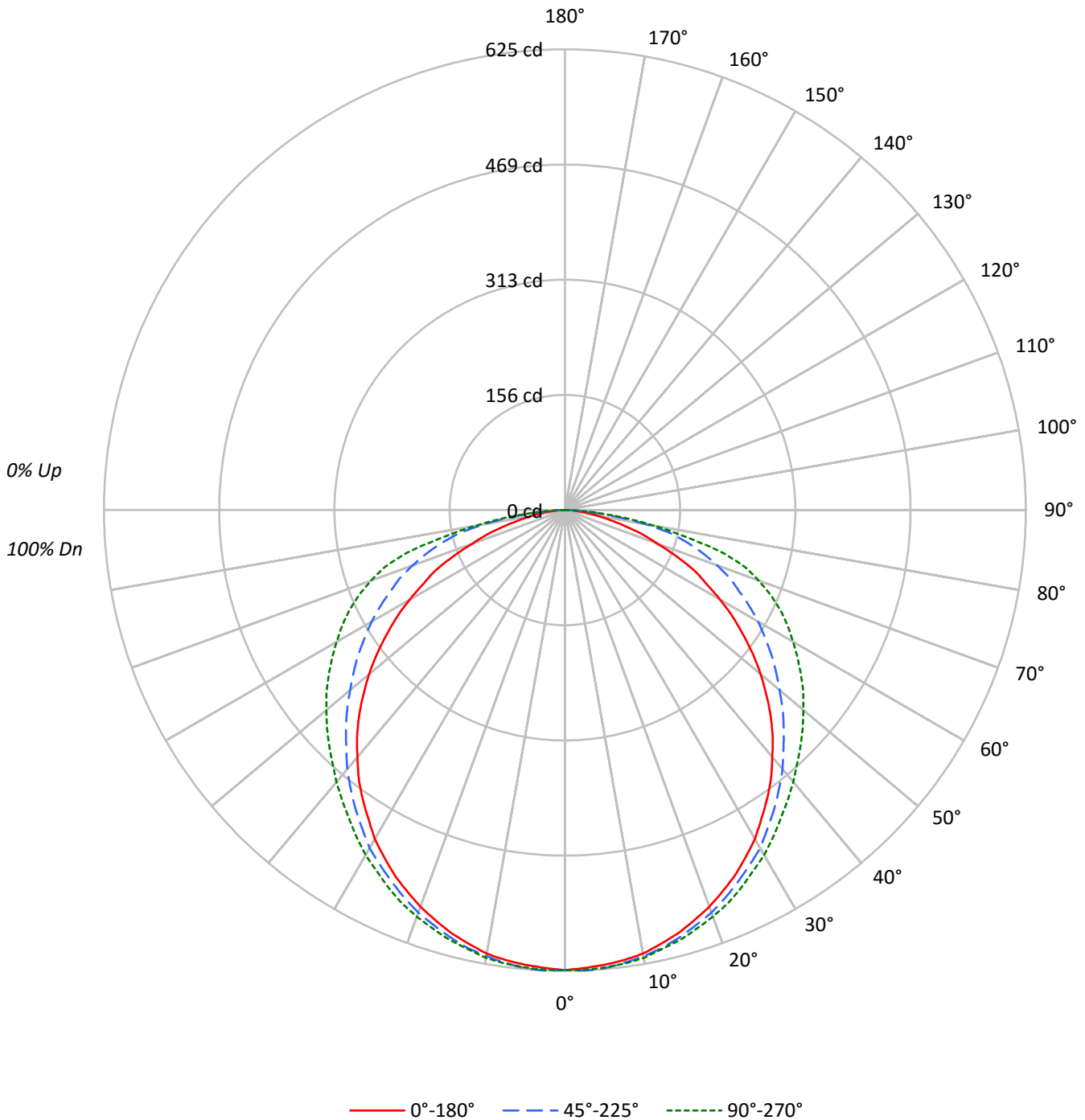
Input Watts (W): 22.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1679	1679	1679
5°	1673	1686	1682
10°	1669	1679	1685
15°	1655	1672	1682
20°	1640	1664	1681
25°	1622	1651	1679
30°	1601	1646	1679
35°	1571	1626	1677
40°	1537	1612	1692
45°	1501	1597	1720
50°	1451	1591	1767
55°	1385	1604	1834
60°	1306	1628	1924
65°	1233	1659	2055
70°	1054	1731	2201
75°	883	1802	2287
80°	722	1742	1908
85°	627	1291	1402



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.1	3.1
10°-20°	169.2	8.9
20°-30°	256.4	13.5
30°-40°	309.6	16.3
40°-50°	325.3	17.2
50°-60°	306.1	16.2
60°-70°	255.2	13.5
70°-80°	169.1	8.9
80°-90°	45.1	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°	484.7	25.6
0°-40°	794.3	41.9
0°-60°	1425.6	75.2
0°-90°	1895.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1895.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	624	624	624	624	624	
5°	619	620	624	624	623	59
15°	594	596	600	602	604	168
25°	546	550	556	563	565	252
35°	478	483	495	506	510	299
45°	394	400	420	441	452	304
55°	295	308	342	377	391	264
65°	194	210	261	304	323	188
75°	85	118	173	209	220	92
85°	20	31	42	45	45	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	624.0	624.0	624.0	624.0	624.0
2.5°	621.6	622.8	625.2	625.2	624.0
5°	619.2	620.4	624.0	624.0	622.8
7.5°	615.6	616.8	619.2	621.6	620.4
10°	610.9	612.0	614.4	616.8	616.8
12.5°	602.5	603.7	608.5	609.7	609.7
15°	594.1	596.5	600.1	602.5	603.7
17.5°	583.4	585.7	590.5	595.3	595.3
20°	572.6	575.0	581.0	585.7	586.9
22.5°	559.5	563.0	569.0	575.0	577.4
25°	546.3	549.9	555.9	563.0	565.4
27.5°	530.8	534.3	542.7	551.1	552.3
30°	515.2	518.8	529.6	536.7	540.3
32.5°	496.1	500.9	511.6	522.4	526.0
35°	478.2	482.9	494.9	505.7	510.4
37.5°	459.0	463.8	477.0	490.1	496.1
40°	437.5	443.5	459.0	473.4	481.7
42.5°	417.2	423.2	438.7	457.8	466.2
45°	394.5	400.5	419.6	441.1	451.9
47.5°	370.6	377.7	400.5	426.8	437.5
50°	346.7	355.0	380.1	410.0	422.0
52.5°	321.6	332.3	361.0	393.3	407.6
55°	295.3	308.4	341.9	376.6	390.9
57.5°	270.2	282.1	321.6	358.6	374.2
60°	242.7	258.2	302.4	340.7	357.4
62.5°	216.4	233.1	282.1	322.8	340.7
65°	193.7	210.4	260.6	303.6	322.8
67.5°	163.8	186.5	242.7	283.3	302.4
70°	133.9	165.0	220.0	261.8	279.7
72.5°	111.2	141.1	197.2	239.1	255.8
75°	84.9	118.3	173.3	209.2	220.0
77.5°	63.4	98.0	148.2	166.2	167.4
80°	46.6	75.3	112.4	118.3	123.1
82.5°	32.3	52.6	72.9	80.1	82.5
85°	20.3	31.1	41.8	45.4	45.4
87.5°	10.8	12.0	14.3	14.3	14.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)