

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: P308452

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-RDP-CP187-W2A-U-5000K**

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: P308452
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: 22FCZ2-29HE-UNV-L82765-RDP-CP187-W2A-U-5000K
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: 1656.0 lumens
Efficiency: N/A
Efficacy: 72.3 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

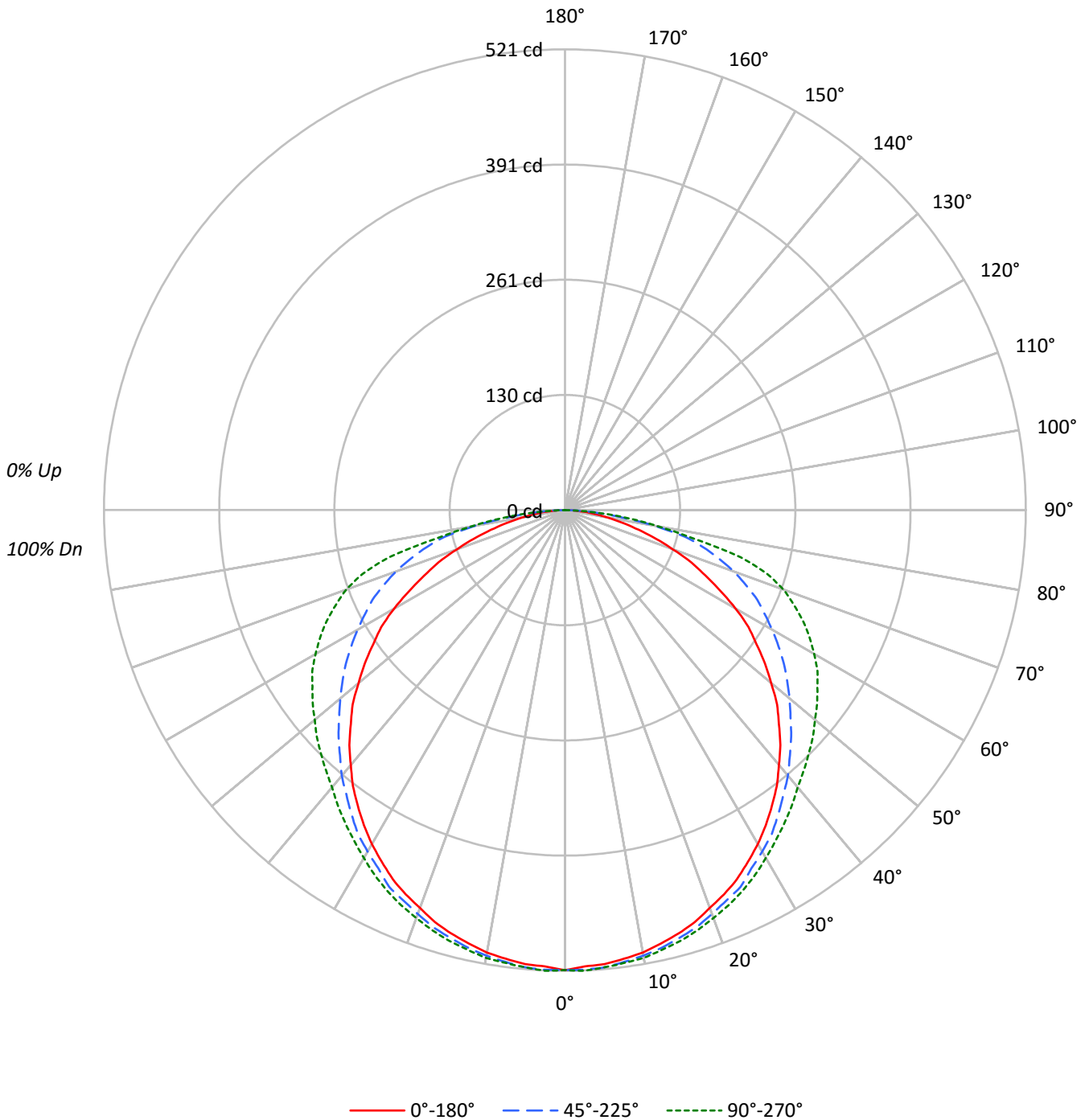
Input Watts (W): 22.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1400	1400	1400
5°	1392	1402	1402
10°	1388	1398	1405
15°	1381	1395	1405
20°	1371	1392	1406
25°	1367	1396	1411
30°	1355	1386	1412
35°	1341	1381	1421
40°	1322	1378	1438
45°	1303	1377	1483
50°	1275	1387	1545
55°	1240	1417	1635
60°	1200	1455	1751
65°	1117	1528	1892
70°	1025	1600	2070
75°	899	1684	2141
80°	773	1604	1680
85°	676	1167	1278



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.2	3.0
10°-20°	141.3	8.5
20°-30°	215.5	13.0
30°-40°	263.2	15.9
40°-50°	281.4	17.0
50°-60°	271.6	16.4
60°-70°	233.8	14.1
70°-80°	158.2	9.6
80°-90°	41.7	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°	406.0	24.5
0°-40°	669.2	40.4
0°-60°	1222.3	73.8
0°-90°	1656.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1656.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	520	520	520	520	520	
5°	515	516	519	519	519	49
15°	496	497	501	503	504	140
25°	460	463	470	473	475	212
35°	408	412	420	429	432	255
45°	342	348	362	380	390	264
55°	264	273	302	333	348	237
65°	175	192	240	278	297	174
75°	86	114	162	195	206	93
85°	22	30	38	39	41	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	520.2	520.2	520.2	520.2	520.2
2.5°	516.5	517.7	520.2	520.2	521.4
5°	515.3	516.5	519.0	519.0	519.0
7.5°	511.7	512.9	515.3	516.5	516.5
10°	508.0	509.2	511.7	512.9	514.1
12.5°	501.9	503.1	506.8	509.2	509.2
15°	495.8	497.0	500.7	503.1	504.3
17.5°	488.5	490.9	494.6	497.0	498.3
20°	478.8	481.2	486.1	489.7	490.9
22.5°	470.2	472.7	477.5	481.2	483.6
25°	460.5	462.9	470.2	472.7	475.1
27.5°	448.3	450.7	456.8	461.7	465.4
30°	436.1	438.6	445.9	452.0	454.4
32.5°	422.7	426.4	434.9	439.8	443.4
35°	408.1	411.8	420.3	428.8	432.5
37.5°	393.5	397.1	405.7	416.6	421.5
40°	376.4	381.3	392.3	406.9	409.3
42.5°	360.6	366.7	376.4	393.5	399.6
45°	342.3	348.4	361.8	380.1	389.8
47.5°	325.3	331.4	346.0	367.9	380.1
50°	304.6	313.1	331.4	356.9	369.1
52.5°	285.1	292.4	316.7	344.8	359.4
55°	264.4	272.9	302.1	332.6	348.4
57.5°	246.1	253.4	286.3	320.4	338.7
60°	222.9	232.7	270.4	307.0	325.3
62.5°	198.6	213.2	254.6	292.4	311.9
65°	175.4	192.5	240.0	277.8	297.2
67.5°	154.7	173.0	221.7	261.9	280.2
70°	130.3	153.5	203.4	242.4	263.1
72.5°	108.4	134.0	182.7	221.7	240.0
75°	86.5	114.5	162.0	194.9	205.9
77.5°	67.0	93.8	138.9	148.6	149.8
80°	49.9	74.3	103.5	104.8	108.4
82.5°	34.1	52.4	67.0	73.1	74.3
85°	21.9	30.5	37.8	39.0	41.4
87.5°	9.7	11.0	13.4	12.2	12.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)