

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: P308630

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-CP187-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: P308630
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-20HE-UNV-L82765-CP187-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 1817.0 lumens
Efficiency: N/A
Efficacy: 107.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

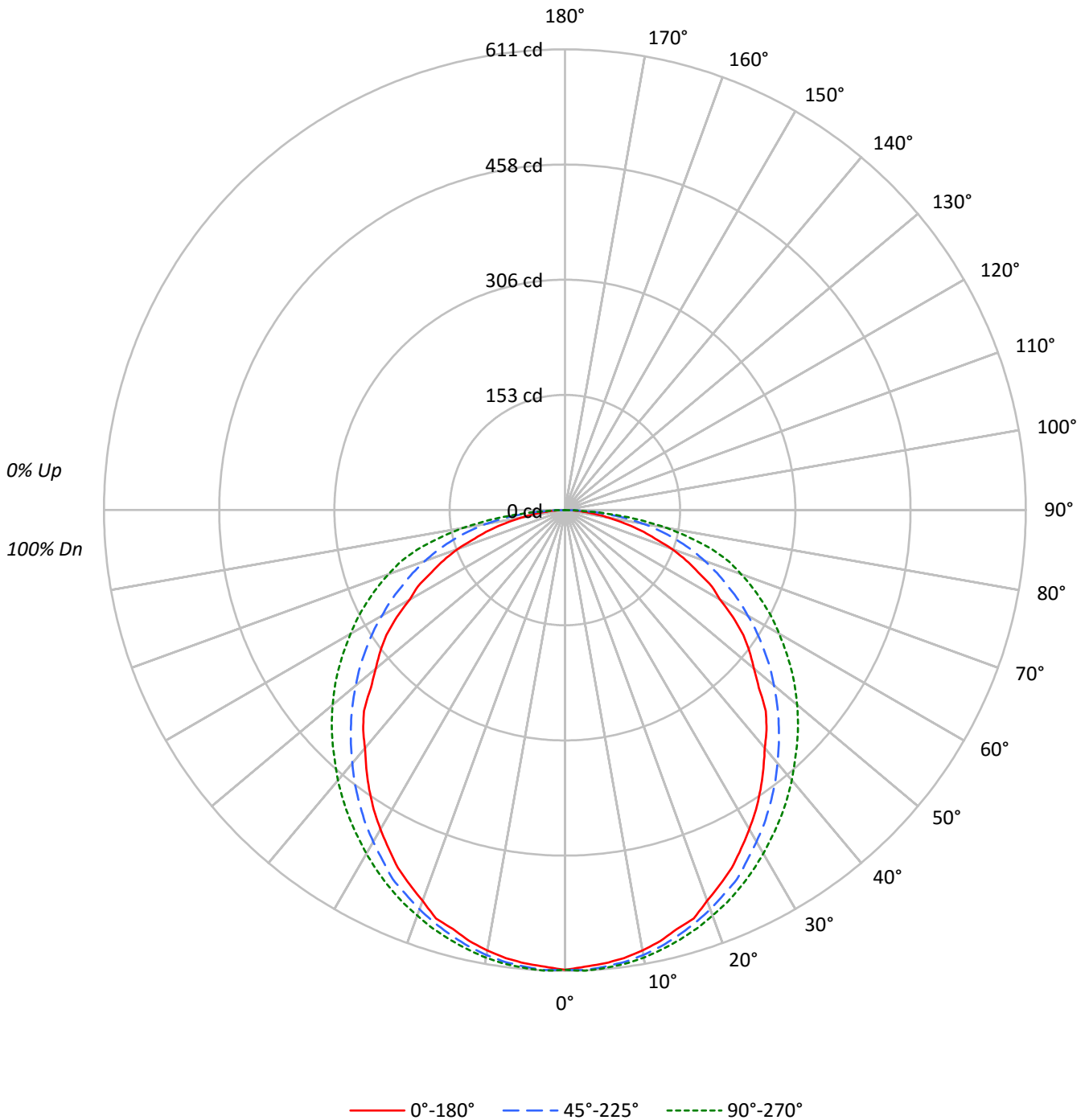
Input Watts (W): 16.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	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	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
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	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1640	1640	1640
5°	1630	1642	1647
10°	1621	1637	1647
15°	1601	1626	1643
20°	1579	1614	1639
25°	1554	1603	1637
30°	1519	1578	1635
35°	1486	1560	1637
40°	1448	1540	1644
45°	1433	1526	1658
50°	1369	1515	1682
55°	1354	1510	1718
60°	1278	1507	1765
65°	1240	1517	1844
70°	1190	1553	1957
75°	1085	1600	2106
80°	930	1658	2129
85°	750	1584	1825



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.7	3.2
10°-20°	164.6	9.1
20°-30°	247.7	13.6
30°-40°	297.2	16.4
40°-50°	310.7	17.1
50°-60°	289.5	15.9
60°-70°	237.5	13.1
70°-80°	160.0	8.8
80°-90°	52.1	2.9
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°	469.9	25.9
0°-40°	767.2	42.2
0°-60°	1367.4	75.3
0°-90°	1817.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1817.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	610	610	610	610	610	
5°	604	605	608	609	610	57
15°	575	578	584	589	590	162
25°	524	527	540	548	551	241
35°	452	458	475	491	498	283
45°	377	379	401	425	436	288
55°	289	294	322	352	366	256
65°	195	204	238	273	290	194
75°	104	116	154	189	203	110
85°	24	35	51	60	59	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	609.6	609.6	609.6	609.6	609.6
2.5°	606.1	607.9	610.5	611.4	611.4
5°	603.5	605.3	607.9	608.7	609.6
7.5°	599.2	600.9	604.4	606.1	607.0
10°	593.1	594.8	599.2	601.8	602.7
12.5°	585.3	587.0	592.2	595.7	596.6
15°	574.8	578.3	583.5	588.7	589.6
17.5°	567.9	567.0	574.0	580.1	581.8
20°	551.4	555.7	563.5	570.5	572.2
22.5°	537.4	540.9	551.4	559.2	562.7
25°	523.5	527.0	540.0	547.9	551.4
27.5°	506.1	511.3	523.5	534.8	539.2
30°	488.7	494.0	507.9	520.9	526.1
32.5°	471.3	477.4	492.2	506.1	512.2
35°	452.2	458.3	474.8	491.3	498.3
37.5°	432.2	440.0	457.4	475.7	483.5
40°	412.2	420.0	438.3	459.2	467.9
42.5°	395.7	399.2	420.0	442.6	451.3
45°	376.6	379.2	400.9	425.3	435.7
47.5°	348.7	358.3	381.8	408.7	419.2
50°	327.0	337.4	361.8	390.5	401.8
52.5°	308.7	315.7	342.6	371.3	384.4
55°	288.7	293.9	321.8	352.2	366.1
57.5°	264.4	273.9	301.8	333.1	347.0
60°	237.4	249.6	280.0	313.9	327.9
62.5°	220.0	227.0	260.0	293.9	309.6
65°	194.8	203.5	238.3	273.1	289.6
67.5°	173.9	182.6	218.3	253.1	269.6
70°	151.3	160.0	197.4	232.2	248.7
72.5°	125.2	137.4	176.5	211.3	228.7
75°	104.4	115.7	153.9	188.7	202.6
77.5°	80.9	95.7	131.3	160.0	170.4
80°	60.0	74.8	107.0	127.8	137.4
82.5°	40.9	55.7	80.0	95.7	100.9
85°	24.3	34.8	51.3	60.0	59.1
87.5°	11.3	14.8	20.9	20.9	20.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)