

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: P308628

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-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: P308628
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-3000K
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: 1719.0 lumens
Efficiency: N/A
Efficacy: 103.6 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

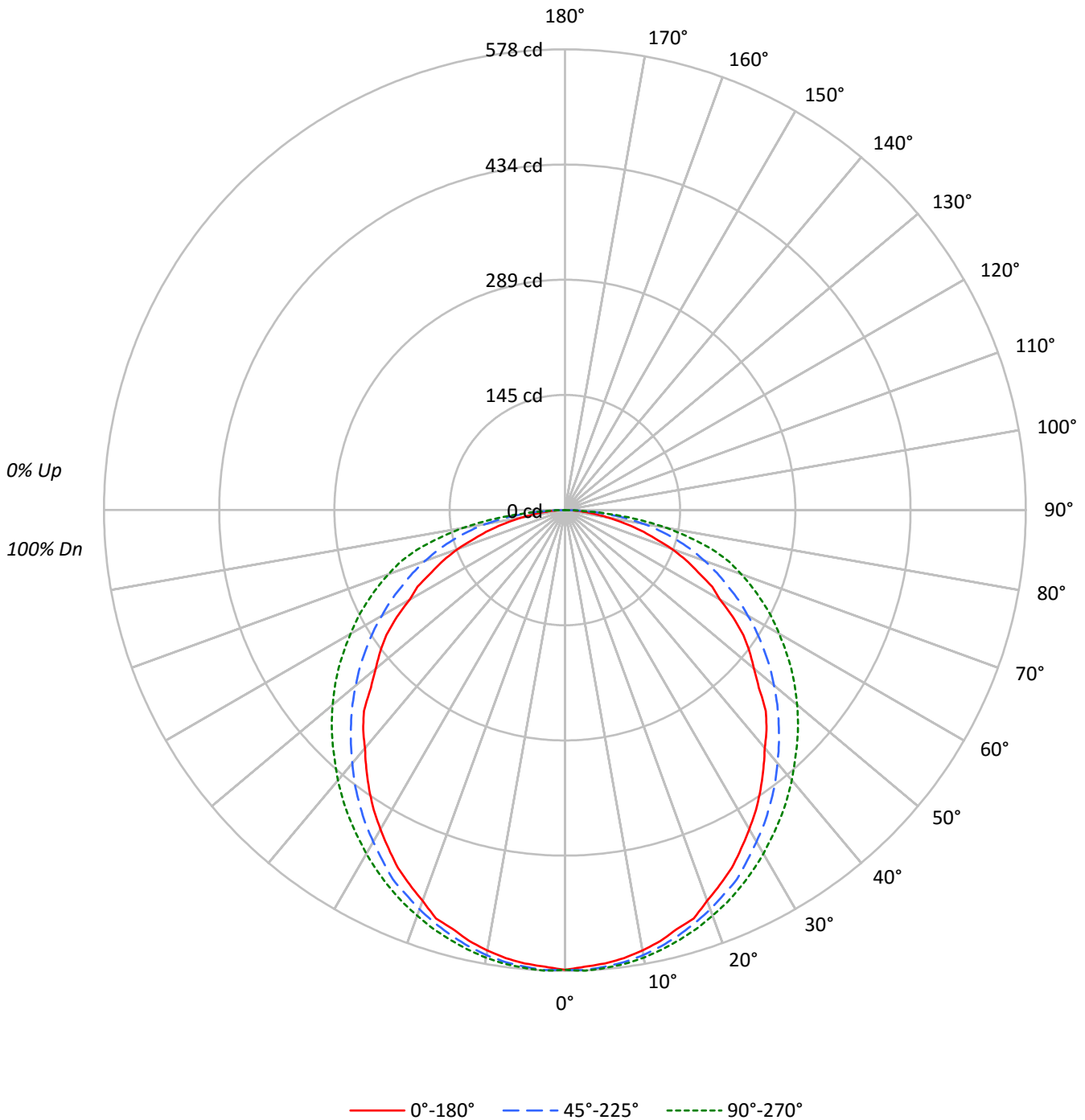
Input Watts (W): 16.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1552	1552	1552
5°	1542	1553	1558
10°	1533	1549	1558
15°	1515	1538	1554
20°	1494	1527	1550
25°	1471	1517	1549
30°	1437	1493	1547
35°	1405	1476	1549
40°	1370	1457	1555
45°	1356	1443	1569
50°	1295	1433	1591
55°	1281	1428	1625
60°	1209	1426	1669
65°	1174	1435	1745
70°	1127	1470	1851
75°	1026	1514	1993
80°	880	1568	2015
85°	710	1497	1726



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.6	3.2
10°-20°	155.7	9.1
20°-30°	234.3	13.6
30°-40°	281.2	16.4
40°-50°	293.9	17.1
50°-60°	273.9	15.9
60°-70°	224.7	13.1
70°-80°	151.4	8.8
80°-90°	49.3	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°	444.6	25.9
0°-40°	725.8	42.2
0°-60°	1293.6	75.3
0°-90°	1719.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1719.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	577	577	577	577	577	
5°	571	573	575	576	577	54
15°	544	547	552	557	558	154
25°	495	499	511	518	522	228
35°	428	434	449	465	471	267
45°	356	359	379	402	412	272
55°	273	278	304	333	346	242
65°	184	192	225	258	274	183
75°	99	109	146	178	192	104
85°	23	33	48	57	56	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	576.7	576.7	576.7	576.7	576.7
2.5°	573.4	575.1	577.6	578.4	578.4
5°	571.0	572.6	575.1	575.9	576.7
7.5°	566.9	568.5	571.8	573.4	574.3
10°	561.1	562.8	566.9	569.3	570.2
12.5°	553.7	555.3	560.3	563.6	564.4
15°	543.8	547.1	552.1	557.0	557.8
17.5°	537.2	536.4	543.0	548.8	550.4
20°	521.6	525.7	533.1	539.7	541.4
22.5°	508.5	511.7	521.6	529.0	532.3
25°	495.3	498.6	510.9	518.3	521.6
27.5°	478.8	483.8	495.3	506.0	510.1
30°	462.4	467.3	480.5	492.8	497.8
32.5°	445.9	451.7	465.7	478.8	484.6
35°	427.8	433.6	449.2	464.8	471.4
37.5°	408.9	416.3	432.8	450.0	457.4
40°	390.0	397.4	414.7	434.4	442.6
42.5°	374.3	377.6	397.4	418.8	427.0
45°	356.2	358.7	379.3	402.3	412.2
47.5°	329.9	339.0	361.2	386.7	396.6
50°	309.3	319.2	342.3	369.4	380.1
52.5°	292.1	298.7	324.2	351.3	363.7
55°	273.1	278.1	304.4	333.2	346.4
57.5°	250.1	259.2	285.5	315.1	328.3
60°	224.6	236.1	264.9	297.0	310.2
62.5°	208.2	214.7	246.0	278.1	292.9
65°	184.3	192.5	225.4	258.3	274.0
67.5°	164.5	172.8	206.5	239.4	255.0
70°	143.2	151.4	186.8	219.7	235.3
72.5°	118.5	130.0	167.0	199.9	216.4
75°	98.7	109.4	145.6	178.5	191.7
77.5°	76.5	90.5	124.2	151.4	161.3
80°	56.8	70.8	101.2	120.9	130.0
82.5°	38.7	52.7	75.7	90.5	95.4
85°	23.0	32.9	48.5	56.8	55.9
87.5°	10.7	14.0	19.7	19.7	18.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)