

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: P308068

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-HRP-CA08-W2A-U-6500K**

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: P308068
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: 22FCZ2-20HE-UNV-L82765-HRP-CA08-W2A-U-6500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC 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: 1580.0 lumens
Efficiency: N/A
Efficacy: 90.8 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

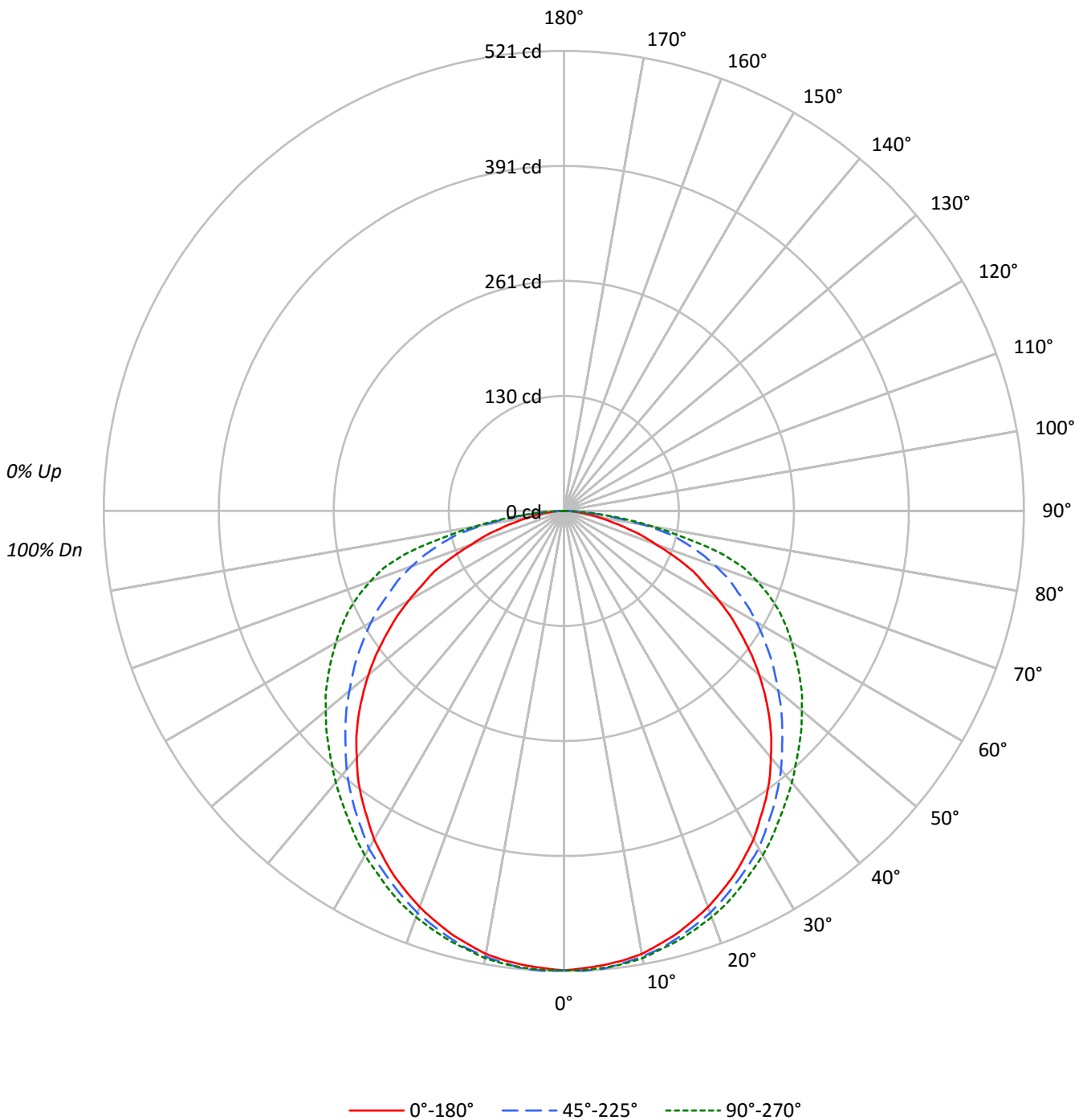
Input Watts (W): 17.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	83	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°	1400	1400	1400
5°	1395	1405	1403
10°	1392	1400	1405
15°	1380	1394	1402
20°	1367	1387	1401
25°	1352	1376	1400
30°	1335	1372	1400
35°	1310	1355	1398
40°	1281	1344	1411
45°	1252	1331	1434
50°	1210	1327	1473
55°	1155	1338	1529
60°	1089	1357	1604
65°	1028	1384	1713
70°	878	1443	1835
75°	736	1502	1907
80°	603	1452	1592
85°	522	1078	1170



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.3	3.1
10°-20°	141.0	8.9
20°-30°	213.8	13.5
30°-40°	258.1	16.3
40°-50°	271.2	17.2
50°-60°	255.2	16.2
60°-70°	212.8	13.5
70°-80°	141.0	8.9
80°-90°	37.6	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°	404.1	25.6
0°-40°	662.2	41.9
0°-60°	1188.7	75.2
0°-90°	1580.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1580.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	520	520	520	520	520	
5°	516	517	520	520	519	49
15°	495	497	500	502	503	140
25°	456	458	464	469	471	210
35°	399	403	413	422	426	249
45°	329	334	350	368	377	253
55°	246	257	285	314	326	220
65°	162	175	217	253	269	157
75°	71	99	144	174	183	77
85°	17	26	35	38	38	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	520.3	520.3	520.3	520.3	520.3
2.5°	518.3	519.3	521.3	521.3	520.3
5°	516.3	517.3	520.3	520.3	519.3
7.5°	513.3	514.3	516.3	518.3	517.3
10°	509.3	510.3	512.3	514.3	514.3
12.5°	502.3	503.3	507.3	508.3	508.3
15°	495.4	497.4	500.3	502.3	503.3
17.5°	486.4	488.4	492.4	496.4	496.4
20°	477.4	479.4	484.4	488.4	489.4
22.5°	466.5	469.4	474.4	479.4	481.4
25°	455.5	458.5	463.5	469.4	471.4
27.5°	442.5	445.5	452.5	459.5	460.5
30°	429.6	432.6	441.5	447.5	450.5
32.5°	413.6	417.6	426.6	435.6	438.5
35°	398.7	402.7	412.6	421.6	425.6
37.5°	382.7	386.7	397.7	408.6	413.6
40°	364.8	369.8	382.7	394.7	401.7
42.5°	347.8	352.8	365.8	381.7	388.7
45°	328.9	333.9	349.8	367.8	376.8
47.5°	309.0	315.0	333.9	355.8	364.8
50°	289.0	296.0	316.9	341.9	351.8
52.5°	268.1	277.1	301.0	327.9	339.9
55°	246.2	257.1	285.1	314.0	325.9
57.5°	225.3	235.2	268.1	299.0	312.0
60°	202.3	215.3	252.2	284.1	298.0
62.5°	180.4	194.4	235.2	269.1	284.1
65°	161.5	175.4	217.3	253.2	269.1
67.5°	136.5	155.5	202.3	236.2	252.2
70°	111.6	137.5	183.4	218.3	233.2
72.5°	92.7	117.6	164.5	199.3	213.3
75°	70.8	98.7	144.5	174.4	183.4
77.5°	52.8	81.7	123.6	138.5	139.5
80°	38.9	62.8	93.7	98.7	102.7
82.5°	26.9	43.9	60.8	66.8	68.8
85°	16.9	25.9	34.9	37.9	37.9
87.5°	9.0	10.0	12.0	12.0	12.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)