

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: P308065

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-HRP-CA08-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: P308065
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-5000K
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: 1556.0 lumens
Efficiency: N/A
Efficacy: 91.0 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

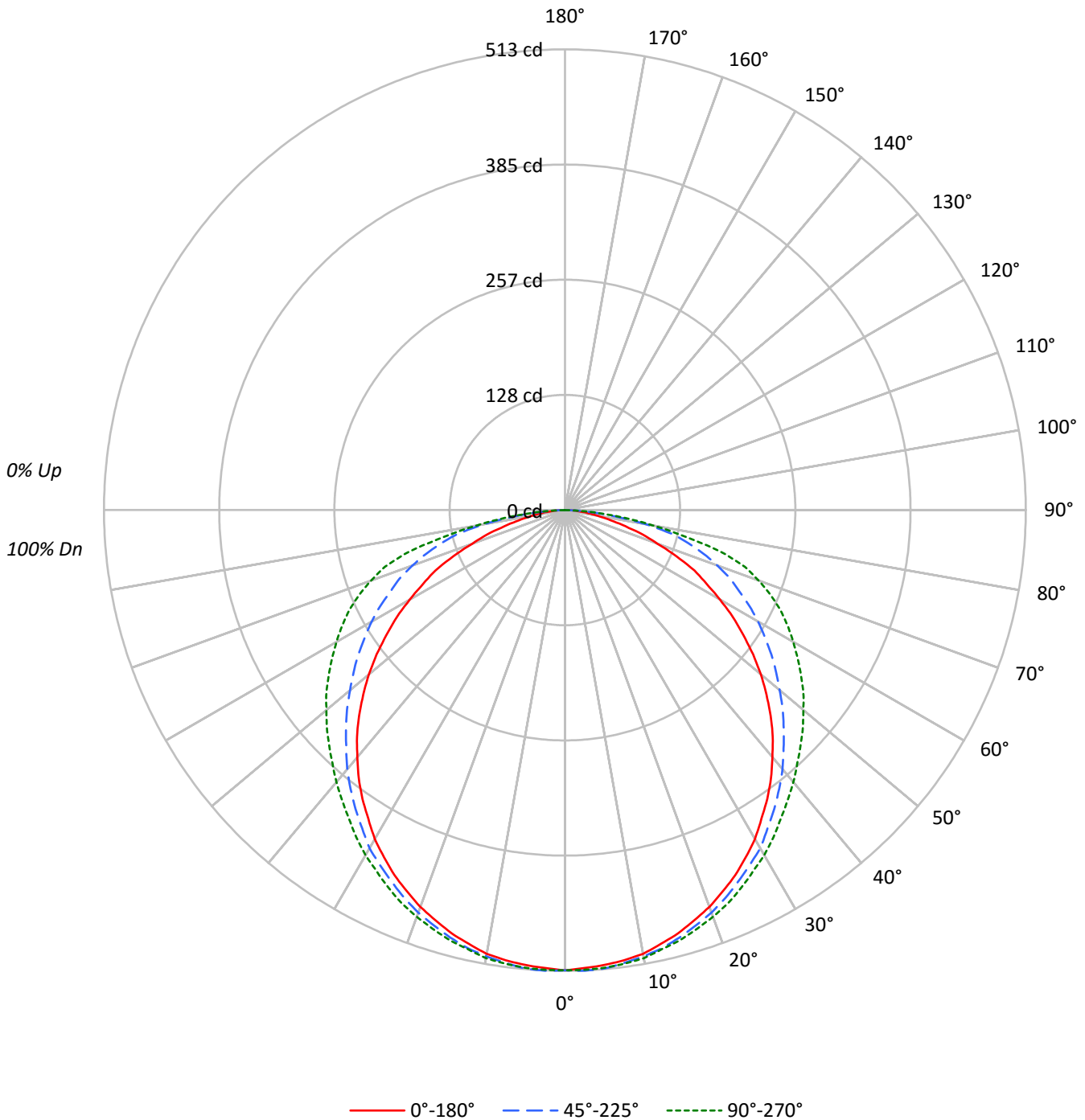
Input Watts (W): 17.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1379	1379	1379
5°	1373	1384	1381
10°	1371	1379	1384
15°	1359	1373	1381
20°	1347	1366	1380
25°	1332	1355	1379
30°	1315	1351	1379
35°	1290	1335	1377
40°	1262	1324	1390
45°	1233	1311	1412
50°	1192	1307	1451
55°	1137	1317	1506
60°	1073	1336	1580
65°	1012	1363	1687
70°	865	1421	1807
75°	725	1480	1878
80°	594	1430	1567
85°	516	1062	1152



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.6	3.1
10°-20°	138.9	8.9
20°-30°	210.5	13.5
30°-40°	254.2	16.3
40°-50°	267.1	17.2
50°-60°	251.3	16.2
60°-70°	209.5	13.5
70°-80°	138.8	8.9
80°-90°	37.0	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°	398.0	25.6
0°-40°	652.2	41.9
0°-60°	1170.6	75.2
0°-90°	1556.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1556.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	512	512	512	512	512	
5°	508	509	512	512	511	48
15°	488	490	493	495	496	138
25°	449	452	456	462	464	207
35°	393	396	406	415	419	245
45°	324	329	344	362	371	250
55°	242	253	281	309	321	217
65°	159	173	214	249	265	155
75°	70	97	142	172	181	76
85°	17	26	34	37	37	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	512.4	512.4	512.4	512.4	512.4
2.5°	510.4	511.4	513.4	513.4	512.4
5°	508.4	509.4	512.4	512.4	511.4
7.5°	505.5	506.5	508.4	510.4	509.4
10°	501.6	502.6	504.5	506.5	506.5
12.5°	494.7	495.7	499.6	500.6	500.6
15°	487.8	489.8	492.7	494.7	495.7
17.5°	479.0	481.0	484.9	488.8	488.8
20°	470.2	472.1	477.0	481.0	481.9
22.5°	459.4	462.3	467.2	472.1	474.1
25°	448.6	451.5	456.4	462.3	464.3
27.5°	435.8	438.8	445.6	452.5	453.5
30°	423.1	426.0	434.8	440.7	443.7
32.5°	407.3	411.3	420.1	428.9	431.9
35°	392.6	396.5	406.4	415.2	419.1
37.5°	376.9	380.8	391.6	402.4	407.3
40°	359.3	364.2	376.9	388.7	395.6
42.5°	342.6	347.5	360.2	375.9	382.8
45°	323.9	328.8	344.5	362.2	371.0
47.5°	304.3	310.2	328.8	350.4	359.3
50°	284.7	291.5	312.1	336.7	346.5
52.5°	264.0	272.9	296.4	322.9	334.7
55°	242.4	253.2	280.7	309.2	321.0
57.5°	221.8	231.6	264.0	294.5	307.2
60°	199.3	212.0	248.3	279.7	293.5
62.5°	177.7	191.4	231.6	265.0	279.7
65°	159.0	172.8	214.0	249.3	265.0
67.5°	134.5	153.1	199.3	232.6	248.3
70°	109.9	135.5	180.6	215.0	229.7
72.5°	91.3	115.8	162.0	196.3	210.1
75°	69.7	97.2	142.3	171.8	180.6
77.5°	52.0	80.5	121.7	136.4	137.4
80°	38.3	61.8	92.3	97.2	101.1
82.5°	26.5	43.2	59.9	65.8	67.7
85°	16.7	25.5	34.4	37.3	37.3
87.5°	8.8	9.8	11.8	11.8	11.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)