

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: P308101

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-HRP-CP250-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: P308101
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-CP250-W2A-U-5000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
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: 1444.0 lumens
Efficiency: N/A
Efficacy: 84.4 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

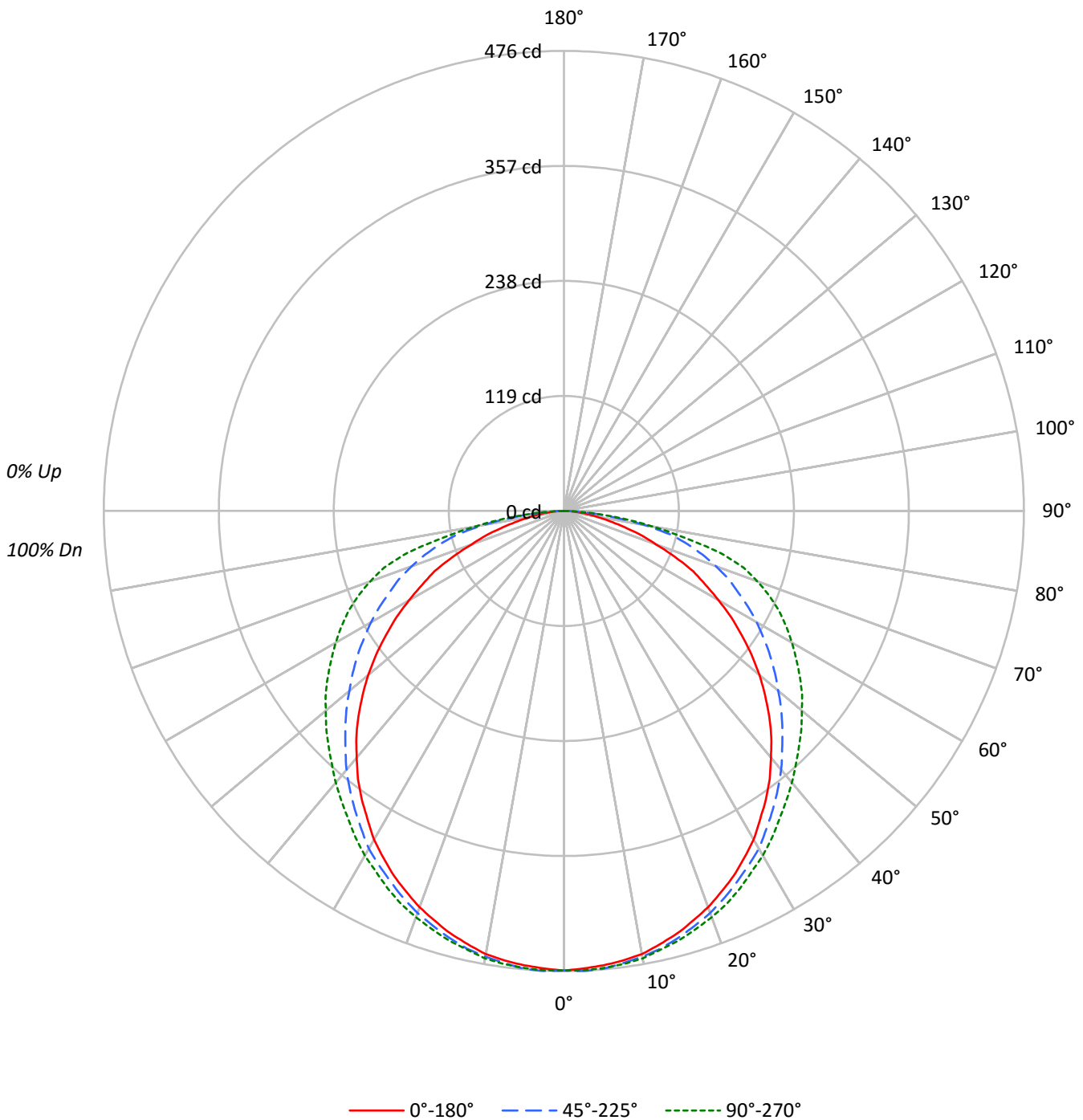
Input Watts (W): 17.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1280	1280	1280
5°	1274	1284	1282
10°	1272	1279	1284
15°	1261	1274	1282
20°	1249	1268	1281
25°	1236	1258	1279
30°	1220	1254	1279
35°	1197	1239	1278
40°	1171	1229	1290
45°	1144	1217	1310
50°	1106	1213	1346
55°	1056	1222	1398
60°	995	1241	1466
65°	940	1265	1566
70°	803	1319	1677
75°	673	1373	1743
80°	550	1327	1454
85°	479	985	1068



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.1	3.1
10°-20°	128.9	8.9
20°-30°	195.4	13.5
30°-40°	235.9	16.3
40°-50°	247.9	17.2
50°-60°	233.2	16.2
60°-70°	194.5	13.5
70°-80°	128.9	8.9
80°-90°	34.3	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°	369.3	25.6
0°-40°	605.2	41.9
0°-60°	1086.3	75.2
0°-90°	1444.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1444.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	476	476	476	476	476	
5°	472	473	476	476	475	45
15°	453	454	457	459	460	128
25°	416	419	424	429	431	192
35°	364	368	377	385	389	228
45°	301	305	320	336	344	232
55°	225	235	260	287	298	201
65°	148	160	199	231	246	144
75°	65	90	132	159	168	70
85°	16	24	32	35	35	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	475.5	475.5	475.5	475.5	475.5
2.5°	473.7	474.6	476.4	476.4	475.5
5°	471.8	472.8	475.5	475.5	474.6
7.5°	469.1	470.0	471.8	473.7	472.8
10°	465.5	466.4	468.2	470.0	470.0
12.5°	459.1	460.0	463.7	464.6	464.6
15°	452.7	454.5	457.3	459.1	460.0
17.5°	444.5	446.3	450.0	453.6	453.6
20°	436.3	438.1	442.7	446.3	447.3
22.5°	426.3	429.0	433.6	438.1	440.0
25°	416.3	419.0	423.6	429.0	430.9
27.5°	404.4	407.2	413.6	419.9	420.8
30°	392.6	395.3	403.5	409.0	411.7
32.5°	378.0	381.7	389.9	398.1	400.8
35°	364.4	368.0	377.1	385.3	389.0
37.5°	349.8	353.4	363.5	373.5	378.0
40°	333.4	337.9	349.8	360.7	367.1
42.5°	317.9	322.5	334.3	348.9	355.3
45°	300.6	305.2	319.7	336.1	344.3
47.5°	282.4	287.8	305.2	325.2	333.4
50°	264.2	270.5	289.7	312.4	321.5
52.5°	245.0	253.2	275.1	299.7	310.6
55°	225.0	235.0	260.5	286.9	297.9
57.5°	205.9	215.0	245.0	273.3	285.1
60°	184.9	196.8	230.5	259.6	272.4
62.5°	164.9	177.6	215.0	245.9	259.6
65°	147.6	160.3	198.6	231.4	245.9
67.5°	124.8	142.1	184.9	215.9	230.5
70°	102.0	125.7	167.6	199.5	213.2
72.5°	84.7	107.5	150.3	182.2	194.9
75°	64.7	90.2	132.1	159.4	167.6
77.5°	48.3	74.7	113.0	126.6	127.5
80°	35.5	57.4	85.6	90.2	93.8
82.5°	24.6	40.1	55.6	61.0	62.9
85°	15.5	23.7	31.9	34.6	34.6
87.5°	8.2	9.1	10.9	10.9	10.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)