

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: P312451

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-HRP-CP125-W2A-U-3500K**

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: P312451
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-L83050-HRP-CP125-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (168) 3500K 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: 1531.0 lumens
Efficiency: N/A
Efficacy: 91.7 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

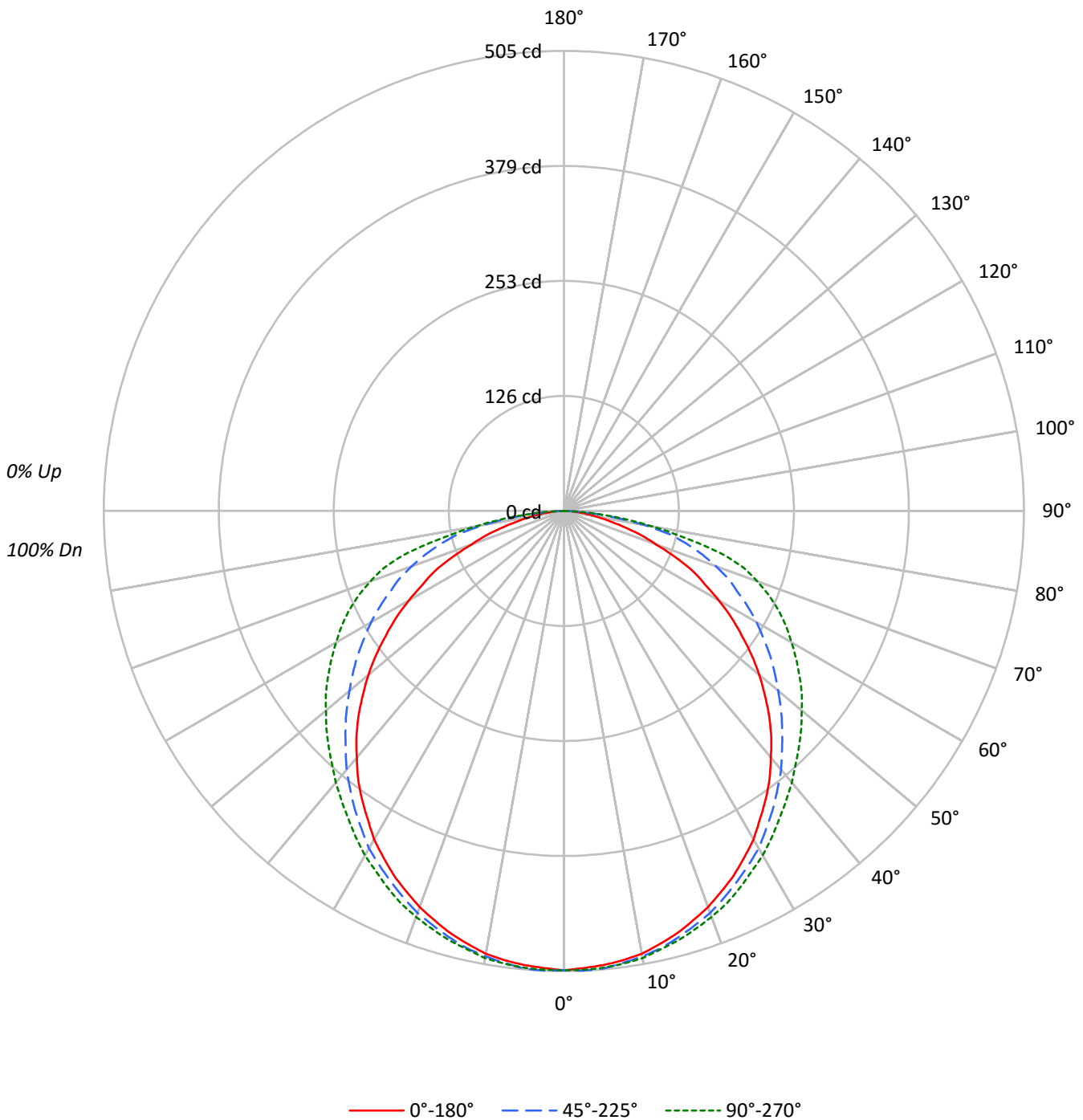
Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1357	1357	1357
5°	1351	1362	1359
10°	1348	1356	1362
15°	1337	1351	1359
20°	1325	1344	1358
25°	1311	1333	1356
30°	1294	1329	1356
35°	1269	1313	1355
40°	1242	1303	1367
45°	1213	1290	1389
50°	1173	1286	1427
55°	1119	1296	1482
60°	1055	1315	1554
65°	996	1340	1661
70°	851	1398	1778
75°	713	1456	1848
80°	584	1407	1542
85°	506	1044	1133



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.8	3.1
10°-20°	136.7	8.9
20°-30°	207.1	13.5
30°-40°	250.1	16.3
40°-50°	262.8	17.2
50°-60°	247.3	16.2
60°-70°	206.2	13.5
70°-80°	136.6	8.9
80°-90°	36.4	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°	391.6	25.6
0°-40°	641.7	41.9
0°-60°	1151.8	75.2
0°-90°	1531.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1531.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	504	504	504	504	504	
5°	500	501	504	504	503	48
15°	480	482	485	487	488	135
25°	441	444	449	455	457	203
35°	386	390	400	408	412	242
45°	319	324	339	356	365	245
55°	238	249	276	304	316	213
65°	156	170	210	245	261	152
75°	69	96	140	169	178	74
85°	16	25	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°	504.1	504.1	504.1	504.1	504.1
2.5°	502.2	503.2	505.1	505.1	504.1
5°	500.3	501.2	504.1	504.1	503.2
7.5°	497.4	498.3	500.3	502.2	501.2
10°	493.5	494.5	496.4	498.3	498.3
12.5°	486.8	487.7	491.6	492.6	492.6
15°	480.0	481.9	484.8	486.8	487.7
17.5°	471.3	473.2	477.1	481.0	481.0
20°	462.6	464.5	469.4	473.2	474.2
22.5°	452.0	454.9	459.7	464.5	466.5
25°	441.4	444.3	449.1	454.9	456.8
27.5°	428.8	431.7	438.5	445.2	446.2
30°	416.3	419.2	427.8	433.6	436.5
32.5°	400.8	404.7	413.4	422.0	424.9
35°	386.3	390.2	399.8	408.5	412.4
37.5°	370.9	374.7	385.3	396.0	400.8
40°	353.5	358.3	370.9	382.5	389.2
42.5°	337.1	341.9	354.4	369.9	376.7
45°	318.7	323.5	339.0	356.4	365.1
47.5°	299.4	305.2	323.5	344.8	353.5
50°	280.1	286.8	307.1	331.3	340.9
52.5°	259.8	268.5	291.7	317.7	329.3
55°	238.5	249.2	276.2	304.2	315.8
57.5°	218.3	227.9	259.8	289.7	302.3
60°	196.1	208.6	244.3	275.2	288.8
62.5°	174.8	188.3	227.9	260.8	275.2
65°	156.5	170.0	210.5	245.3	260.8
67.5°	132.3	150.7	196.1	228.9	244.3
70°	108.2	133.3	177.7	211.5	226.0
72.5°	89.8	114.0	159.4	193.2	206.7
75°	68.6	95.6	140.0	169.0	177.7
77.5°	51.2	79.2	119.8	134.2	135.2
80°	37.7	60.8	90.8	95.6	99.5
82.5°	26.1	42.5	58.9	64.7	66.6
85°	16.4	25.1	33.8	36.7	36.7
87.5°	8.7	9.7	11.6	11.6	11.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)