

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: P313677

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-RDP-CP125-W2A-U-4000K**

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: P313677
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-55HE-UNV-L83050-RDP-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (336) 4000K 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: 3501.0 lumens
Efficiency: N/A
Efficacy: 79.4 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

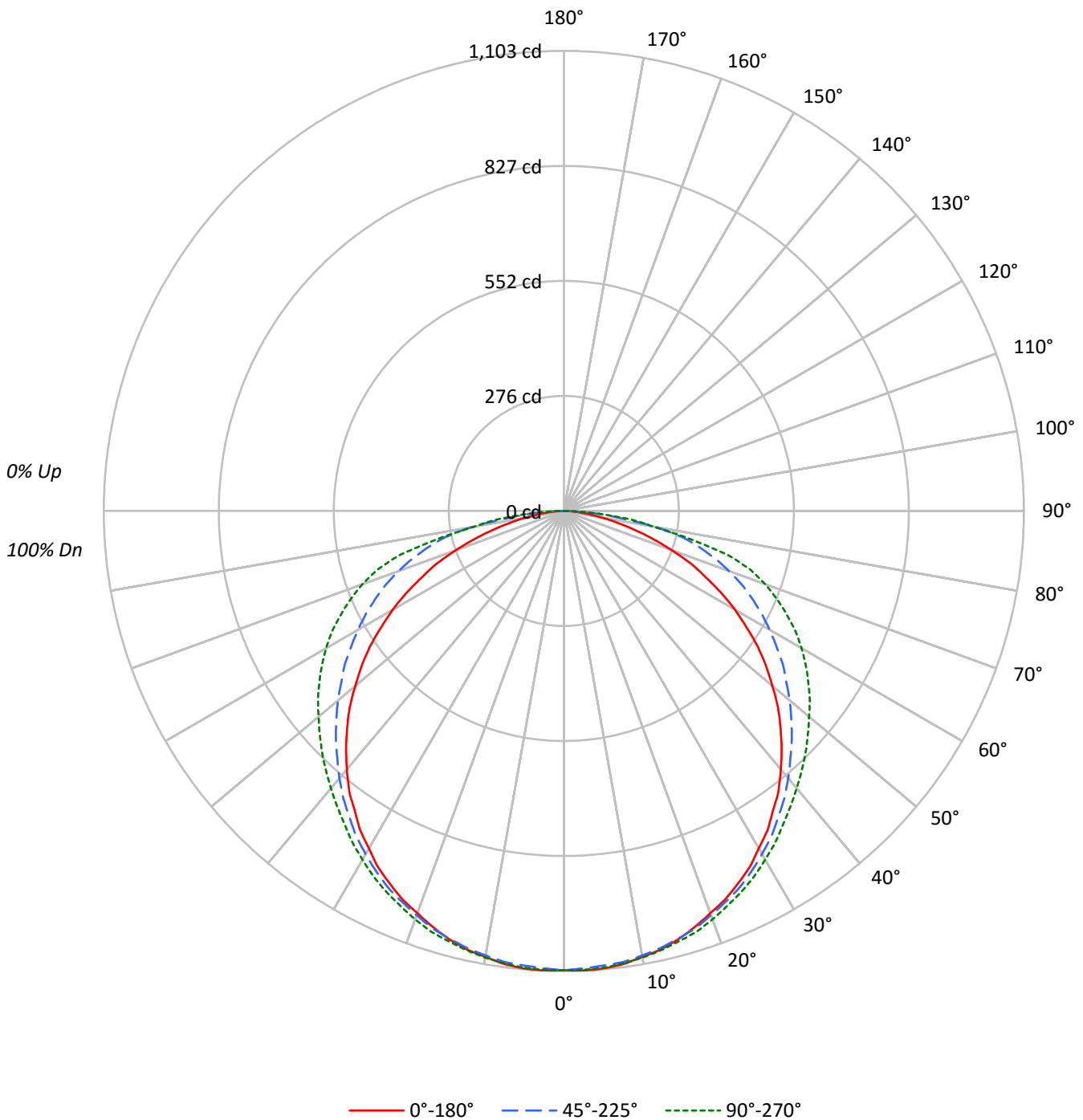
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1481	1481	1481
5°	1487	1478	1485
10°	1483	1478	1485
15°	1480	1478	1488
20°	1469	1477	1492
25°	1464	1480	1495
30°	1452	1476	1500
35°	1438	1472	1506
40°	1421	1470	1525
45°	1398	1470	1560
50°	1367	1479	1607
55°	1332	1503	1678
60°	1276	1533	1771
65°	1194	1587	1880
70°	1086	1660	2022
75°	921	1751	2112
80°	727	1763	1709
85°	536	1340	1501



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.4	3.0
10°-20°	300.6	8.6
20°-30°	459.6	13.1
30°-40°	561.9	16.0
40°-50°	598.9	17.1
50°-60°	572.6	16.4
60°-70°	485.1	13.9
70°-80°	326.0	9.3
80°-90°	92.0	2.6
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°	864.6	24.7
0°-40°	1426.5	40.7
0°-60°	2598.0	74.2
0°-90°	3501.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3501.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1101	1101	1101	1101	1101	
5°	1101	1099	1094	1099	1099	105
15°	1063	1063	1061	1070	1068	300
25°	986	990	997	1006	1007	455
35°	875	882	896	913	917	548
45°	735	747	773	806	820	567
55°	568	589	641	691	716	506
65°	375	413	498	564	590	372
75°	177	241	337	394	406	190
85°	35	71	87	94	97	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1101.0	1101.0	1101.0	1101.0	1101.0
2.5°	1102.7	1102.7	1097.5	1101.0	1101.0
5°	1101.0	1099.2	1094.0	1099.2	1099.2
7.5°	1095.8	1094.0	1090.5	1095.8	1094.0
10°	1085.3	1085.3	1081.9	1087.1	1087.1
12.5°	1076.7	1074.9	1073.2	1080.1	1078.4
15°	1062.8	1062.8	1061.0	1069.7	1068.0
17.5°	1045.4	1047.1	1048.9	1055.8	1057.6
20°	1026.3	1029.8	1031.5	1041.9	1041.9
22.5°	1008.9	1010.7	1014.1	1024.6	1024.6
25°	986.4	989.8	996.8	1005.5	1007.2
27.5°	963.8	965.5	974.2	986.4	988.1
30°	934.3	939.5	949.9	963.8	965.5
32.5°	908.2	913.4	925.6	939.5	942.9
35°	875.2	882.2	896.1	913.4	916.9
37.5°	845.7	850.9	868.3	887.4	892.6
40°	809.2	819.6	837.0	859.6	868.3
42.5°	772.8	783.2	804.0	833.5	844.0
45°	734.6	746.7	772.8	805.8	819.6
47.5°	696.4	710.2	739.8	778.0	793.6
50°	652.9	670.3	706.8	750.2	767.5
52.5°	611.3	632.1	672.0	720.7	743.2
55°	567.8	588.7	640.8	691.1	715.5
57.5°	519.2	547.0	604.3	661.6	687.7
60°	474.1	500.1	569.6	632.1	658.1
62.5°	425.5	460.2	534.9	600.8	626.9
65°	375.1	413.3	498.4	564.4	590.4
67.5°	329.9	371.6	461.9	527.9	554.0
70°	276.1	328.2	422.0	488.0	514.0
72.5°	225.7	283.1	380.3	444.6	468.9
75°	177.1	241.4	336.9	394.2	406.3
77.5°	132.0	199.7	291.7	316.0	307.4
80°	93.8	159.8	227.5	215.3	220.5
82.5°	60.8	121.6	140.7	159.8	165.0
85°	34.7	71.2	86.8	93.8	97.2
87.5°	15.6	26.0	34.7	34.7	33.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)