

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: P314000

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-CP125-W2A-U-3000K**

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: P314000
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-50HE-UNV-L83050-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 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: 4243.0 lumens
Efficiency: N/A
Efficacy: 110.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

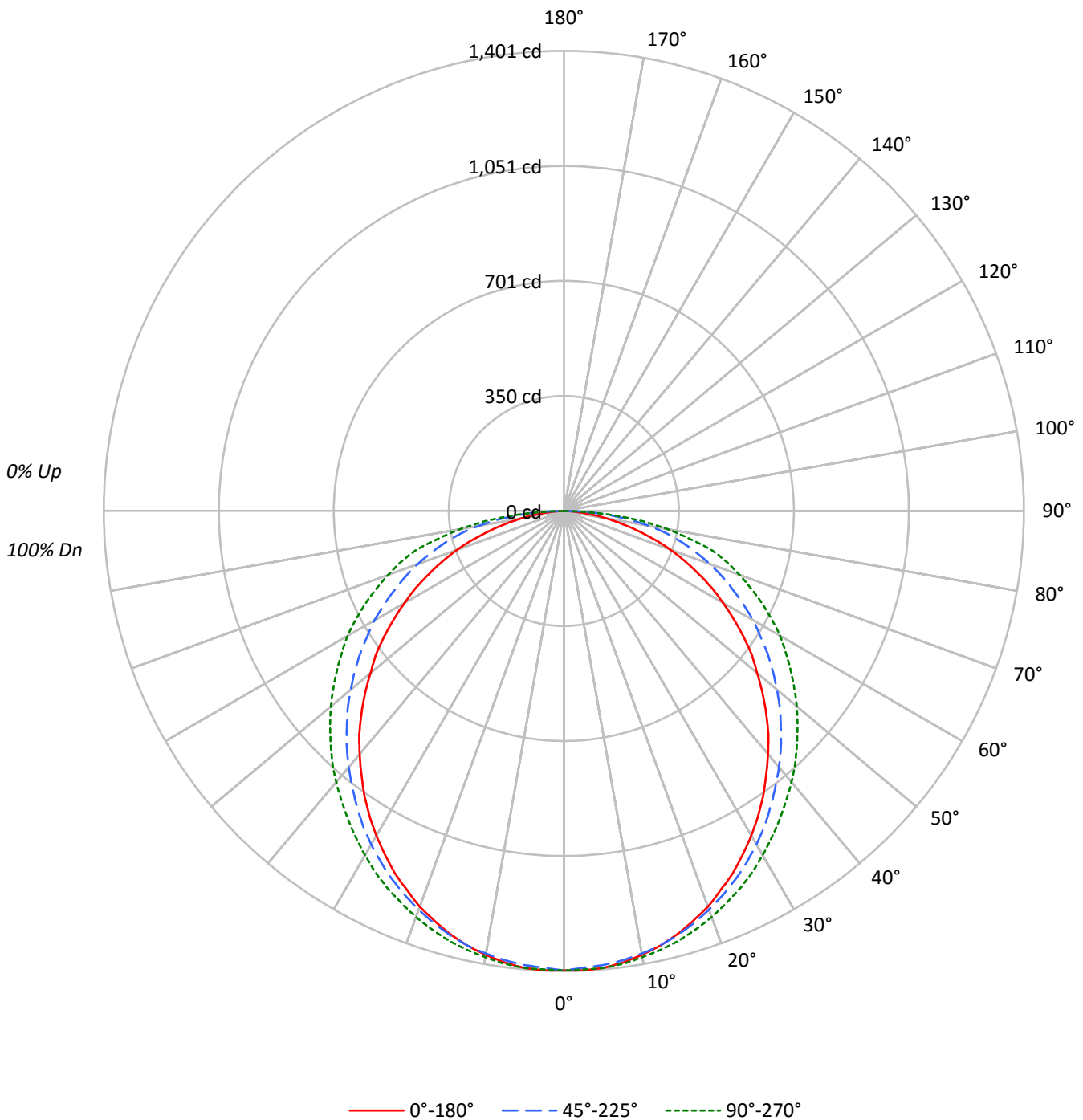
Input Watts (W): 38.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	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°	1883	1883	1883
5°	1886	1875	1886
10°	1875	1869	1885
15°	1859	1863	1886
20°	1836	1850	1885
25°	1808	1837	1883
30°	1774	1822	1881
35°	1739	1804	1882
40°	1699	1790	1894
45°	1658	1779	1910
50°	1609	1774	1939
55°	1569	1777	1978
60°	1508	1792	2046
65°	1439	1811	2120
70°	1362	1866	2237
75°	1215	1947	2444
80°	1036	2062	2498
85°	739	2042	2391



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.4	3.1
10°-20°	378.7	8.9
20°-30°	571.9	13.5
30°-40°	689.3	16.2
40°-50°	723.6	17.1
50°-60°	677.0	16.0
60°-70°	559.1	13.2
70°-80°	381.0	9.0
80°-90°	129.9	3.1
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°	1083.0	25.5
0°-40°	1772.3	41.8
0°-60°	3173.0	74.8
0°-90°	4243.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4243.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1399	1399	1399	1399	1399	
5°	1396	1395	1388	1396	1396	133
15°	1334	1336	1337	1351	1354	376
25°	1218	1223	1237	1261	1268	560
35°	1059	1070	1098	1135	1146	662
45°	871	890	935	985	1004	672
55°	669	695	757	819	843	597
65°	452	490	569	640	666	448
75°	234	287	374	445	470	249
85°	48	94	132	149	155	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1399.3	1399.3	1399.3	1399.3	1399.3
2.5°	1400.7	1399.3	1392.3	1399.3	1397.9
5°	1396.5	1395.1	1388.0	1396.5	1396.5
7.5°	1386.6	1386.6	1379.6	1389.5	1390.9
10°	1372.6	1372.6	1368.3	1379.6	1379.6
12.5°	1355.7	1355.7	1355.7	1366.9	1368.3
15°	1334.5	1336.0	1337.4	1351.4	1354.3
17.5°	1309.2	1312.0	1316.2	1333.1	1336.0
20°	1282.5	1285.3	1292.3	1312.0	1316.2
22.5°	1248.7	1255.7	1265.6	1288.1	1292.3
25°	1217.7	1223.3	1237.4	1261.3	1268.4
27.5°	1179.7	1188.1	1206.4	1231.8	1241.6
30°	1141.7	1150.1	1172.7	1202.2	1210.7
32.5°	1100.9	1113.5	1137.5	1168.4	1178.3
35°	1058.6	1069.9	1098.0	1134.6	1145.9
37.5°	1012.2	1027.7	1058.6	1098.0	1112.1
40°	967.1	984.0	1019.2	1061.4	1078.3
42.5°	922.1	939.0	978.4	1026.3	1043.1
45°	871.4	889.7	934.7	985.4	1003.7
47.5°	820.7	843.2	892.5	946.0	965.7
50°	768.6	794.0	847.5	903.8	926.3
52.5°	722.2	746.1	802.4	863.0	884.1
55°	668.7	695.4	757.4	819.3	843.2
57.5°	613.8	643.3	709.5	777.1	801.0
60°	560.3	592.7	665.9	733.4	760.2
62.5°	508.2	540.6	616.6	687.0	713.7
65°	451.9	489.9	568.7	640.5	665.9
67.5°	398.4	439.2	522.3	592.7	618.0
70°	346.3	385.7	474.4	543.4	568.7
72.5°	290.0	335.0	423.7	495.5	522.3
75°	233.7	287.2	374.5	444.8	470.2
77.5°	181.6	236.5	323.8	381.5	394.2
80°	133.7	190.0	266.1	306.9	322.4
82.5°	85.9	142.2	202.7	232.3	244.9
85°	47.9	94.3	132.3	149.2	154.9
87.5°	19.7	40.8	53.5	60.5	60.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)