

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: P313999

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-CA125-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: P313999
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-CA125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 5000K 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: 4853.0 lumens
Efficiency: N/A
Efficacy: 120.4 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

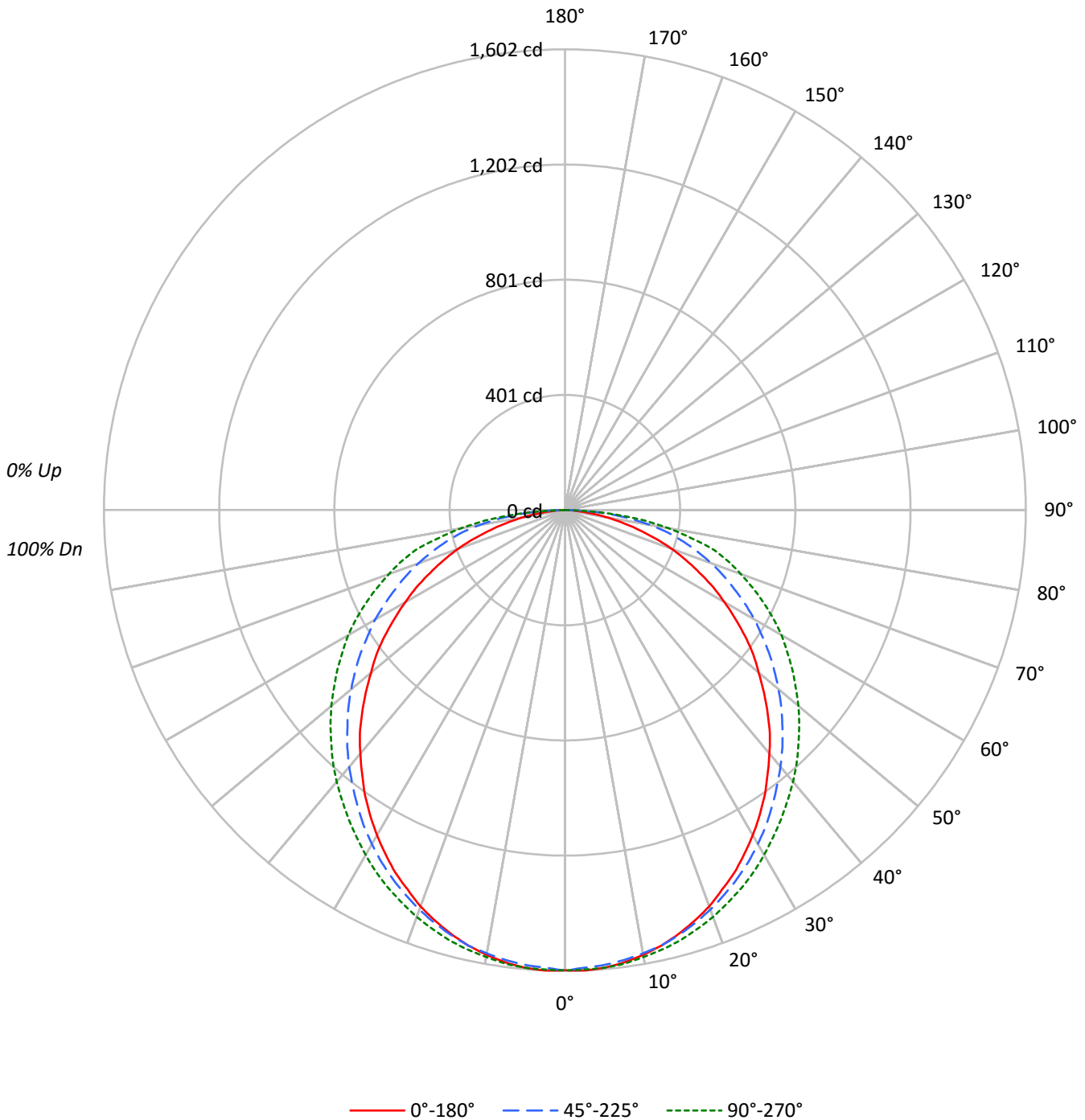
Input Watts (W): 40.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2153	2153	2153
5°	2157	2144	2157
10°	2145	2138	2156
15°	2126	2131	2158
20°	2100	2116	2156
25°	2068	2101	2154
30°	2029	2084	2151
35°	1989	2063	2153
40°	1943	2047	2166
45°	1897	2034	2184
50°	1840	2029	2218
55°	1794	2032	2263
60°	1724	2049	2340
65°	1646	2071	2425
70°	1558	2135	2559
75°	1390	2227	2796
80°	1185	2358	2857
85°	844	2337	2734



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.5	3.1
10°-20°	433.1	8.9
20°-30°	654.2	13.5
30°-40°	788.4	16.2
40°-50°	827.7	17.1
50°-60°	774.4	16.0
60°-70°	639.5	13.2
70°-80°	435.8	9.0
80°-90°	148.6	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°	1238.7	25.5
0°-40°	2027.1	41.8
0°-60°	3629.2	74.8
0°-90°	4853.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4853.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1600	1600	1600	1600	1600	
5°	1597	1596	1588	1597	1597	152
15°	1526	1528	1530	1546	1549	430
25°	1393	1399	1415	1443	1451	641
35°	1211	1224	1256	1298	1311	757
45°	997	1018	1069	1127	1148	769
55°	765	795	866	937	964	683
65°	517	560	650	733	762	513
75°	267	328	428	509	538	285
85°	55	108	151	171	177	69
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1600.5	1600.5	1600.5	1600.5	1600.5
2.5°	1602.1	1600.5	1592.4	1600.5	1598.9
5°	1597.3	1595.6	1587.6	1597.3	1597.3
7.5°	1586.0	1586.0	1577.9	1589.2	1590.8
10°	1569.9	1569.9	1565.1	1577.9	1577.9
12.5°	1550.6	1550.6	1550.6	1563.4	1565.1
15°	1526.4	1528.0	1529.6	1545.7	1549.0
17.5°	1497.4	1500.6	1505.5	1524.8	1528.0
20°	1466.8	1470.1	1478.1	1500.6	1505.5
22.5°	1428.2	1436.2	1447.5	1473.3	1478.1
25°	1392.8	1399.2	1415.3	1442.7	1450.7
27.5°	1349.3	1359.0	1379.9	1408.9	1420.1
30°	1305.8	1315.5	1341.2	1375.1	1384.7
32.5°	1259.1	1273.6	1301.0	1336.4	1347.7
35°	1210.8	1223.7	1255.9	1297.8	1310.7
37.5°	1157.7	1175.4	1210.8	1255.9	1272.0
40°	1106.2	1125.5	1165.7	1214.0	1233.4
42.5°	1054.6	1074.0	1119.0	1173.8	1193.1
45°	996.7	1017.6	1069.1	1127.1	1148.0
47.5°	938.7	964.5	1020.8	1082.0	1104.6
50°	879.1	908.1	969.3	1033.7	1059.5
52.5°	826.0	853.4	917.8	987.0	1011.2
55°	764.8	795.4	866.3	937.1	964.5
57.5°	702.0	735.8	811.5	888.8	916.2
60°	640.8	677.9	761.6	838.9	869.5
62.5°	581.3	618.3	705.2	785.7	816.3
65°	516.9	560.3	650.5	732.6	761.6
67.5°	455.7	502.4	597.4	677.9	706.9
70°	396.1	441.2	542.6	621.5	650.5
72.5°	331.7	383.2	484.7	566.8	597.4
75°	267.3	328.5	428.3	508.8	537.8
77.5°	207.7	270.5	370.3	436.3	450.8
80°	153.0	217.4	304.3	351.0	368.7
82.5°	98.2	162.6	231.9	265.7	280.2
85°	54.7	107.9	151.4	170.7	177.1
87.5°	22.5	46.7	61.2	69.2	69.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)