

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: P314076

Luminaire Tested: **24FCZ2-60HE-UNV-L83050-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: P314076
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: 24FCZ2-60HE-UNV-L83050-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 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: 5388.0 lumens
Efficiency: N/A
Efficacy: 113.2 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

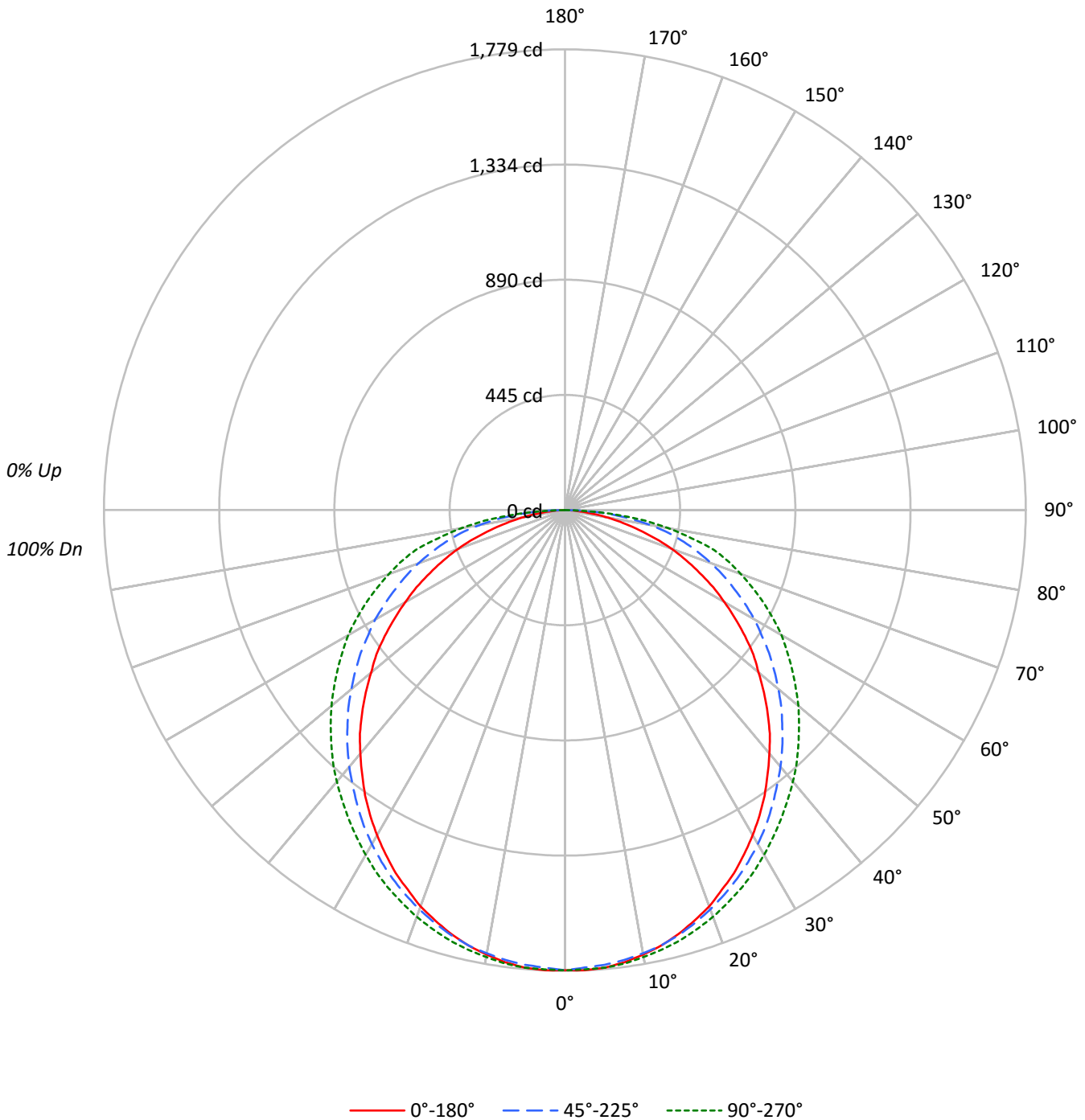
Input Watts (W): 47.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2391	2391	2391
5°	2395	2381	2395
10°	2381	2374	2394
15°	2361	2366	2395
20°	2332	2350	2393
25°	2296	2333	2391
30°	2252	2314	2389
35°	2208	2290	2390
40°	2157	2273	2405
45°	2106	2259	2425
50°	2043	2253	2462
55°	1992	2256	2512
60°	1915	2275	2598
65°	1827	2299	2692
70°	1730	2370	2841
75°	1542	2472	3104
80°	1316	2618	3172
85°	939	2594	3035



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.2	3.1
10°-20°	480.8	8.9
20°-30°	726.3	13.5
30°-40°	875.3	16.2
40°-50°	918.9	17.1
50°-60°	859.7	16.0
60°-70°	710.0	13.2
70°-80°	483.8	9.0
80°-90°	165.0	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°	1375.3	25.5
0°-40°	2250.6	41.8
0°-60°	4029.3	74.8
0°-90°	5388.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5388.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1777	1777	1777	1777	1777	
5°	1773	1772	1763	1773	1773	168
15°	1695	1696	1698	1716	1720	478
25°	1546	1554	1571	1602	1611	711
35°	1344	1359	1394	1441	1455	840
45°	1107	1130	1187	1251	1275	853
55°	849	883	962	1040	1071	758
65°	574	622	722	813	846	569
75°	297	365	476	565	597	316
85°	61	120	168	190	197	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1776.9	1776.9	1776.9	1776.9	1776.9
2.5°	1778.7	1776.9	1768.0	1776.9	1775.1
5°	1773.3	1771.6	1762.6	1773.3	1773.3
7.5°	1760.8	1760.8	1751.9	1764.4	1766.2
10°	1743.0	1743.0	1737.6	1751.9	1751.9
12.5°	1721.5	1721.5	1721.5	1735.8	1737.6
15°	1694.7	1696.5	1698.3	1716.1	1719.7
17.5°	1662.5	1666.1	1671.4	1692.9	1696.5
20°	1628.5	1632.1	1641.1	1666.1	1671.4
22.5°	1585.6	1594.6	1607.1	1635.7	1641.1
25°	1546.3	1553.5	1571.3	1601.7	1610.7
27.5°	1498.0	1508.8	1532.0	1564.2	1576.7
30°	1449.8	1460.5	1489.1	1526.6	1537.4
32.5°	1397.9	1414.0	1444.4	1483.7	1496.3
35°	1344.3	1358.6	1394.4	1440.8	1455.1
37.5°	1285.3	1305.0	1344.3	1394.4	1412.2
40°	1228.1	1249.6	1294.3	1347.9	1369.3
42.5°	1170.9	1192.4	1242.4	1303.2	1324.6
45°	1106.6	1129.8	1187.0	1251.3	1274.6
47.5°	1042.2	1070.8	1133.4	1201.3	1226.3
50°	976.1	1008.2	1076.2	1147.7	1176.3
52.5°	917.1	947.4	1019.0	1095.8	1122.6
55°	849.1	883.1	961.8	1040.4	1070.8
57.5°	779.4	817.0	901.0	986.8	1017.2
60°	711.5	752.6	845.6	931.4	965.3
62.5°	645.3	686.5	783.0	872.4	906.3
65°	573.8	622.1	722.2	813.4	845.6
67.5°	505.9	557.7	663.2	752.6	784.8
70°	439.8	489.8	602.4	690.0	722.2
72.5°	368.3	425.5	538.1	629.2	663.2
75°	296.7	364.7	475.5	564.9	597.1
77.5°	230.6	300.3	411.2	484.5	500.5
80°	169.8	241.3	337.9	389.7	409.4
82.5°	109.0	180.6	257.4	295.0	311.0
85°	60.8	119.8	168.0	189.5	196.6
87.5°	25.0	51.8	67.9	76.9	76.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)