

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: P314070

Luminaire Tested: **24FCZ2-60HE-UNV-L83050-CA125-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: P314070
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-CA125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC 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: 5193.0 lumens
Efficiency: N/A
Efficacy: 109.3 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

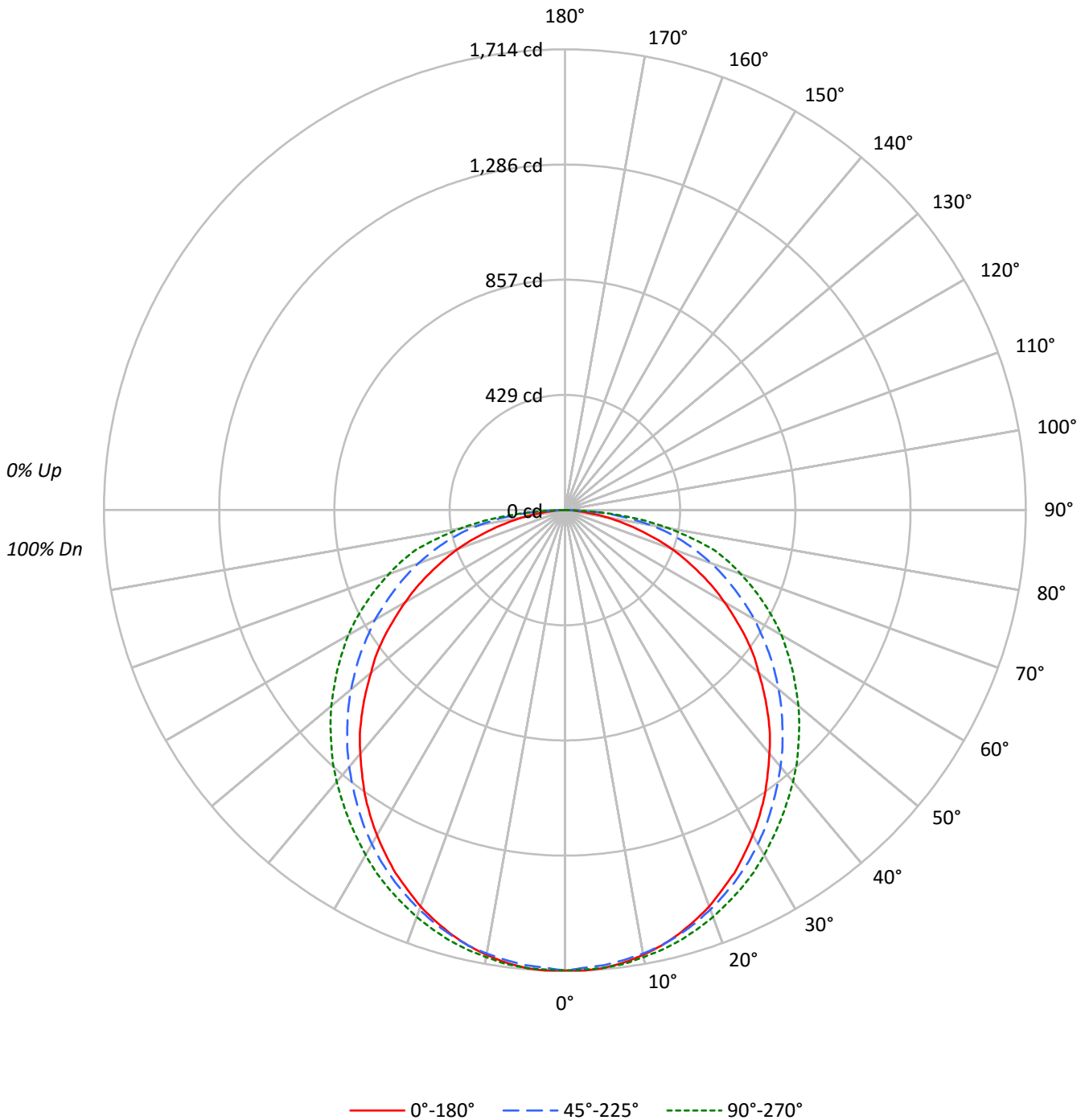
Input Watts (W): 47.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2304	2304	2304
5°	2308	2294	2308
10°	2295	2288	2307
15°	2275	2280	2309
20°	2247	2265	2307
25°	2212	2248	2305
30°	2171	2230	2302
35°	2128	2207	2304
40°	2079	2191	2318
45°	2029	2177	2338
50°	1969	2171	2373
55°	1920	2174	2421
60°	1845	2193	2504
65°	1761	2216	2595
70°	1667	2284	2738
75°	1487	2383	2992
80°	1268	2523	3058
85°	905	2501	2925



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.1	3.1
10°-20°	463.4	8.9
20°-30°	700.0	13.5
30°-40°	843.6	16.2
40°-50°	885.7	17.1
50°-60°	828.6	16.0
60°-70°	684.3	13.2
70°-80°	466.3	9.0
80°-90°	159.0	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°	1325.5	25.5
0°-40°	2169.1	41.8
0°-60°	3883.4	74.8
0°-90°	5193.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5193.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1713	1713	1713	1713	1713	
5°	1709	1707	1699	1709	1709	162
15°	1633	1635	1637	1654	1658	460
25°	1490	1497	1514	1544	1552	686
35°	1296	1309	1344	1389	1402	810
45°	1066	1089	1144	1206	1228	823
55°	818	851	927	1003	1032	730
65°	553	600	696	784	815	549
75°	286	352	458	544	576	305
85°	59	115	162	183	190	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1712.6	1712.6	1712.6	1712.6	1712.6
2.5°	1714.3	1712.6	1704.0	1712.6	1710.9
5°	1709.2	1707.4	1698.8	1709.2	1709.2
7.5°	1697.1	1697.1	1688.5	1700.5	1702.3
10°	1679.9	1679.9	1674.7	1688.5	1688.5
12.5°	1659.2	1659.2	1659.2	1673.0	1674.7
15°	1633.4	1635.1	1636.8	1654.0	1657.5
17.5°	1602.3	1605.8	1611.0	1631.6	1635.1
20°	1569.6	1573.0	1581.7	1605.8	1611.0
22.5°	1528.3	1536.9	1548.9	1576.5	1581.7
25°	1490.3	1497.2	1514.5	1543.8	1552.4
27.5°	1443.8	1454.2	1476.6	1507.6	1519.6
30°	1397.3	1407.6	1435.2	1471.4	1481.7
32.5°	1347.3	1362.8	1392.1	1430.0	1442.1
35°	1295.7	1309.4	1343.9	1388.7	1402.5
37.5°	1238.8	1257.7	1295.7	1343.9	1361.1
40°	1183.7	1204.3	1247.4	1299.1	1319.8
42.5°	1128.5	1149.2	1197.4	1256.0	1276.7
45°	1066.5	1088.9	1144.0	1206.1	1228.5
47.5°	1004.5	1032.0	1092.3	1157.8	1181.9
50°	940.7	971.7	1037.2	1106.1	1133.7
52.5°	883.9	913.2	982.1	1056.2	1082.0
55°	818.4	851.1	926.9	1002.8	1032.0
57.5°	751.2	787.4	868.4	951.1	980.4
60°	685.7	725.4	815.0	897.7	930.4
62.5°	622.0	661.6	754.6	840.8	873.5
65°	553.1	599.6	696.1	783.9	815.0
67.5°	487.6	537.6	639.2	725.4	756.4
70°	423.8	472.1	580.6	665.1	696.1
72.5°	354.9	410.1	518.6	606.5	639.2
75°	286.0	351.5	458.3	544.5	575.5
77.5°	222.3	289.5	396.3	466.9	482.4
80°	163.7	232.6	325.6	375.6	394.6
82.5°	105.1	174.0	248.1	284.3	299.8
85°	58.6	115.4	162.0	182.6	189.5
87.5°	24.1	50.0	65.5	74.1	74.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)