

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: P313396

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-HRP-CA125-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: P313396
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-75HE-UNV-L83050-HRP-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC 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: 5335.0 lumens
Efficiency: N/A
Efficacy: 85.0 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

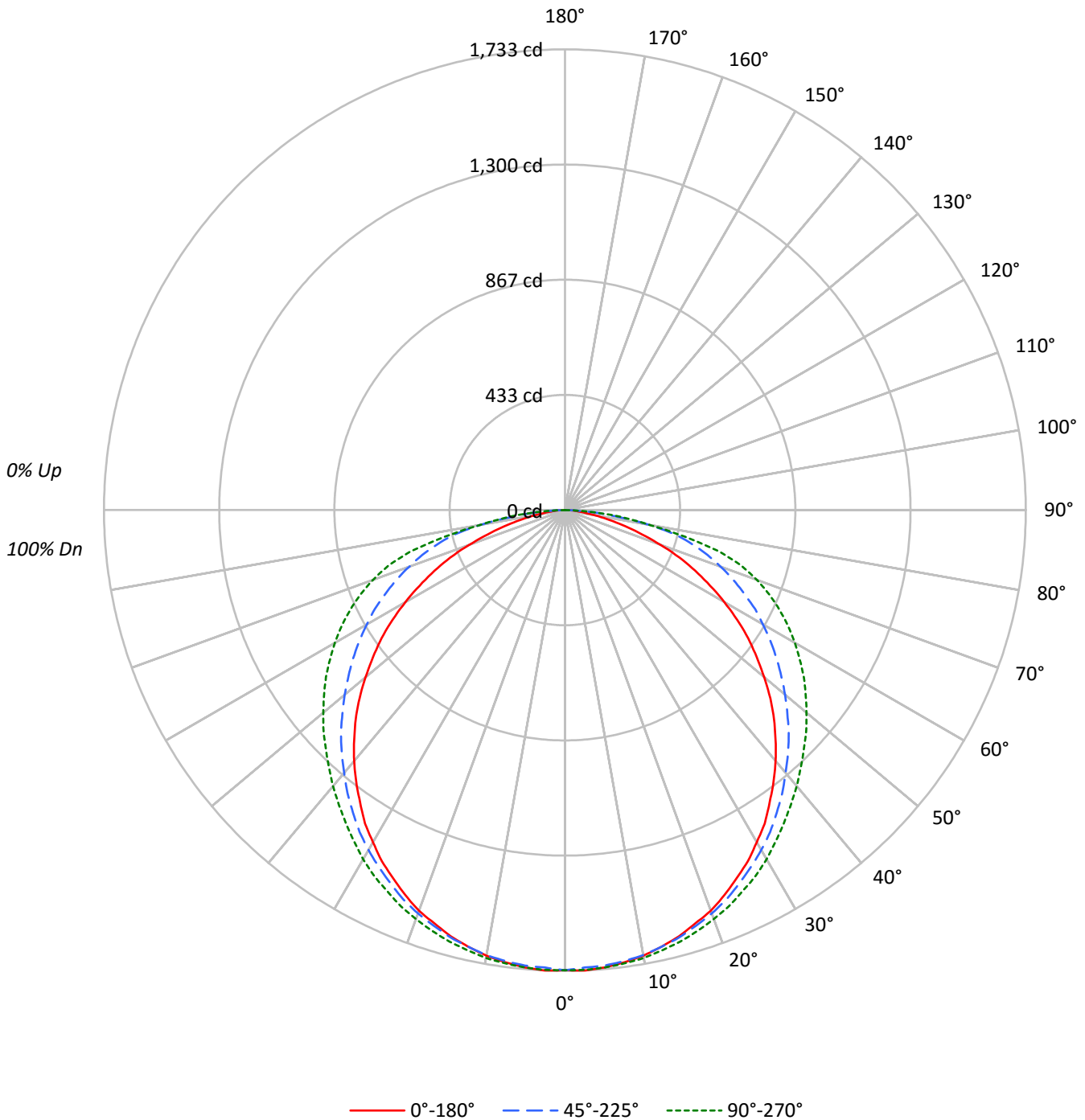
Input Watts (W): 62.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2329	2329	2329
5°	2332	2323	2332
10°	2325	2322	2337
15°	2312	2318	2340
20°	2296	2312	2344
25°	2268	2301	2348
30°	2242	2294	2356
35°	2205	2282	2359
40°	2165	2267	2381
45°	2116	2265	2418
50°	2048	2263	2483
55°	1975	2279	2572
60°	1863	2314	2687
65°	1721	2368	2837
70°	1502	2451	3022
75°	1219	2577	3123
80°	900	2527	2527
85°	690	1862	2103



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.0	3.1
10°-20°	470.9	8.8
20°-30°	716.8	13.4
30°-40°	870.4	16.3
40°-50°	919.6	17.2
50°-60°	867.7	16.3
60°-70°	721.5	13.5
70°-80°	474.7	8.9
80°-90°	129.4	2.4
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°	1351.7	25.3
0°-40°	2222.1	41.7
0°-60°	4009.4	75.2
0°-90°	5335.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5335.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1731	1731	1731	1731	1731	
5°	1726	1726	1720	1726	1726	164
15°	1660	1662	1664	1680	1680	468
25°	1528	1537	1550	1577	1581	705
35°	1342	1358	1389	1425	1436	840
45°	1112	1135	1190	1248	1271	857
55°	842	878	972	1063	1097	750
65°	540	603	744	853	891	534
75°	234	342	496	587	601	253
85°	45	98	121	134	136	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1730.9	1730.9	1730.9	1730.9	1730.9
2.5°	1733.2	1730.9	1722.0	1730.9	1730.9
5°	1726.5	1726.5	1719.8	1726.5	1726.5
7.5°	1715.3	1715.3	1710.8	1719.8	1719.8
10°	1701.9	1701.9	1699.7	1710.8	1710.8
12.5°	1681.8	1684.0	1681.8	1695.2	1695.2
15°	1659.5	1661.7	1663.9	1679.6	1679.6
17.5°	1630.4	1634.9	1639.4	1657.2	1659.5
20°	1603.6	1605.9	1614.8	1634.9	1637.1
22.5°	1567.9	1574.6	1585.8	1605.9	1612.6
25°	1527.7	1536.6	1550.0	1576.8	1581.3
27.5°	1489.7	1496.4	1514.3	1543.3	1552.3
30°	1442.8	1454.0	1476.3	1505.4	1516.5
32.5°	1398.2	1409.3	1436.1	1467.4	1476.3
35°	1342.3	1358.0	1389.2	1425.0	1436.1
37.5°	1288.7	1304.4	1342.3	1382.5	1395.9
40°	1232.9	1250.7	1290.9	1337.9	1355.7
42.5°	1172.6	1197.1	1241.8	1293.2	1313.3
45°	1112.3	1134.6	1190.4	1248.5	1270.8
47.5°	1047.5	1074.3	1134.6	1203.8	1230.6
50°	978.3	1011.8	1081.0	1156.9	1186.0
52.5°	909.0	947.0	1025.2	1110.0	1141.3
55°	842.0	877.8	971.6	1063.1	1096.6
57.5°	768.3	813.0	915.7	1014.0	1047.5
60°	692.4	741.5	859.9	962.6	998.4
62.5°	616.4	672.3	806.3	909.0	947.0
65°	540.5	603.0	743.7	853.2	891.2
67.5°	466.8	536.0	685.7	795.1	833.1
70°	381.9	469.0	623.1	730.3	768.3
72.5°	303.8	404.3	562.8	663.3	696.8
75°	234.5	341.7	495.8	587.4	600.8
77.5°	172.0	279.2	426.6	457.9	460.1
80°	116.1	223.3	326.1	321.6	326.1
82.5°	75.9	167.5	205.5	230.0	232.3
85°	44.7	98.3	120.6	134.0	136.2
87.5°	22.3	33.5	42.4	44.7	49.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)