

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: P314071

Luminaire Tested: **24FCZ2-60HE-UNV-L83050-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: P314071
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-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED 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: 5495.0 lumens
Efficiency: N/A
Efficacy: 115.4 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

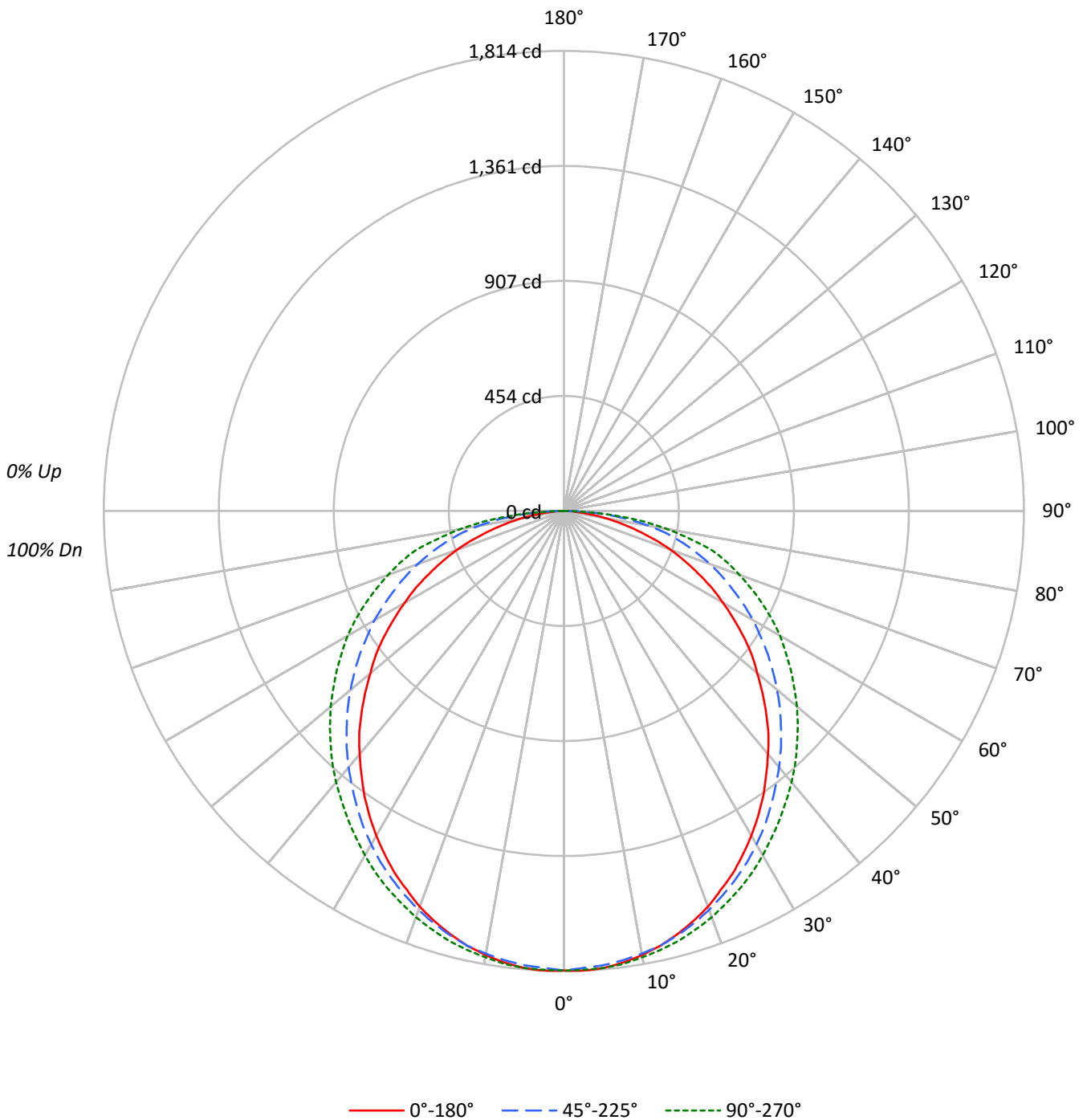
Input Watts (W): 47.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2438	2438	2438
5°	2443	2428	2443
10°	2429	2421	2441
15°	2407	2413	2443
20°	2378	2396	2441
25°	2341	2379	2439
30°	2297	2360	2436
35°	2252	2336	2438
40°	2200	2318	2453
45°	2147	2304	2473
50°	2084	2297	2511
55°	2031	2301	2562
60°	1953	2320	2649
65°	1863	2345	2745
70°	1764	2417	2897
75°	1573	2521	3165
80°	1342	2670	3235
85°	957	2646	3095



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.5	3.1
10°-20°	490.4	8.9
20°-30°	740.7	13.5
30°-40°	892.7	16.2
40°-50°	937.2	17.1
50°-60°	876.8	16.0
60°-70°	724.1	13.2
70°-80°	493.4	9.0
80°-90°	168.3	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°	1402.6	25.5
0°-40°	2295.3	41.8
0°-60°	4109.3	74.8
0°-90°	5495.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5495.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1812	1812	1812	1812	1812	
5°	1809	1807	1798	1809	1809	172
15°	1728	1730	1732	1750	1754	487
25°	1577	1584	1602	1634	1643	726
35°	1371	1386	1422	1470	1484	857
45°	1128	1152	1211	1276	1300	870
55°	866	901	981	1061	1092	773
65°	585	634	736	830	862	580
75°	303	372	485	576	609	323
85°	62	122	171	193	200	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1812.2	1812.2	1812.2	1812.2	1812.2
2.5°	1814.0	1812.2	1803.1	1812.2	1810.4
5°	1808.6	1806.7	1797.6	1808.6	1808.6
7.5°	1795.8	1795.8	1786.7	1799.4	1801.3
10°	1777.6	1777.6	1772.1	1786.7	1786.7
12.5°	1755.7	1755.7	1755.7	1770.3	1772.1
15°	1728.3	1730.2	1732.0	1750.2	1753.9
17.5°	1695.5	1699.2	1704.6	1726.5	1730.2
20°	1660.9	1664.5	1673.6	1699.2	1704.6
22.5°	1617.1	1626.2	1639.0	1668.2	1673.6
25°	1577.0	1584.3	1602.5	1633.5	1642.7
27.5°	1527.8	1538.7	1562.4	1595.2	1608.0
30°	1478.6	1489.5	1518.7	1557.0	1567.9
32.5°	1425.7	1442.1	1473.1	1513.2	1526.0
35°	1371.0	1385.6	1422.1	1469.5	1484.0
37.5°	1310.8	1330.9	1371.0	1422.1	1440.3
40°	1252.5	1274.4	1320.0	1374.6	1396.5
42.5°	1194.2	1216.0	1267.1	1329.1	1350.9
45°	1128.5	1152.2	1210.6	1276.2	1299.9
47.5°	1062.9	1092.1	1155.9	1225.2	1250.7
50°	995.4	1028.3	1097.5	1170.5	1199.6
52.5°	935.3	966.3	1039.2	1117.6	1144.9
55°	866.0	900.6	980.9	1061.1	1092.1
57.5°	794.9	833.2	918.9	1006.4	1037.4
60°	725.6	767.5	862.3	949.9	984.5
62.5°	658.2	700.1	798.5	889.7	924.3
65°	585.2	634.5	736.5	829.5	862.3
67.5°	515.9	568.8	676.4	767.5	800.4
70°	448.5	499.5	614.4	703.7	736.5
72.5°	375.6	433.9	548.8	641.7	676.4
75°	302.6	371.9	485.0	576.1	608.9
77.5°	235.2	306.3	419.3	494.1	510.5
80°	173.2	246.1	344.6	397.4	417.5
82.5°	111.2	184.1	262.5	300.8	317.2
85°	62.0	122.2	171.4	193.3	200.5
87.5°	25.5	52.9	69.3	78.4	78.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)