

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: P310775

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-CA125-W2A-U-5500K**

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: P310775
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: 24FCZ2-45HE-UNV-L82765-CA125-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 5500K 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: 4249.0 lumens
Efficiency: N/A
Efficacy: 122.4 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

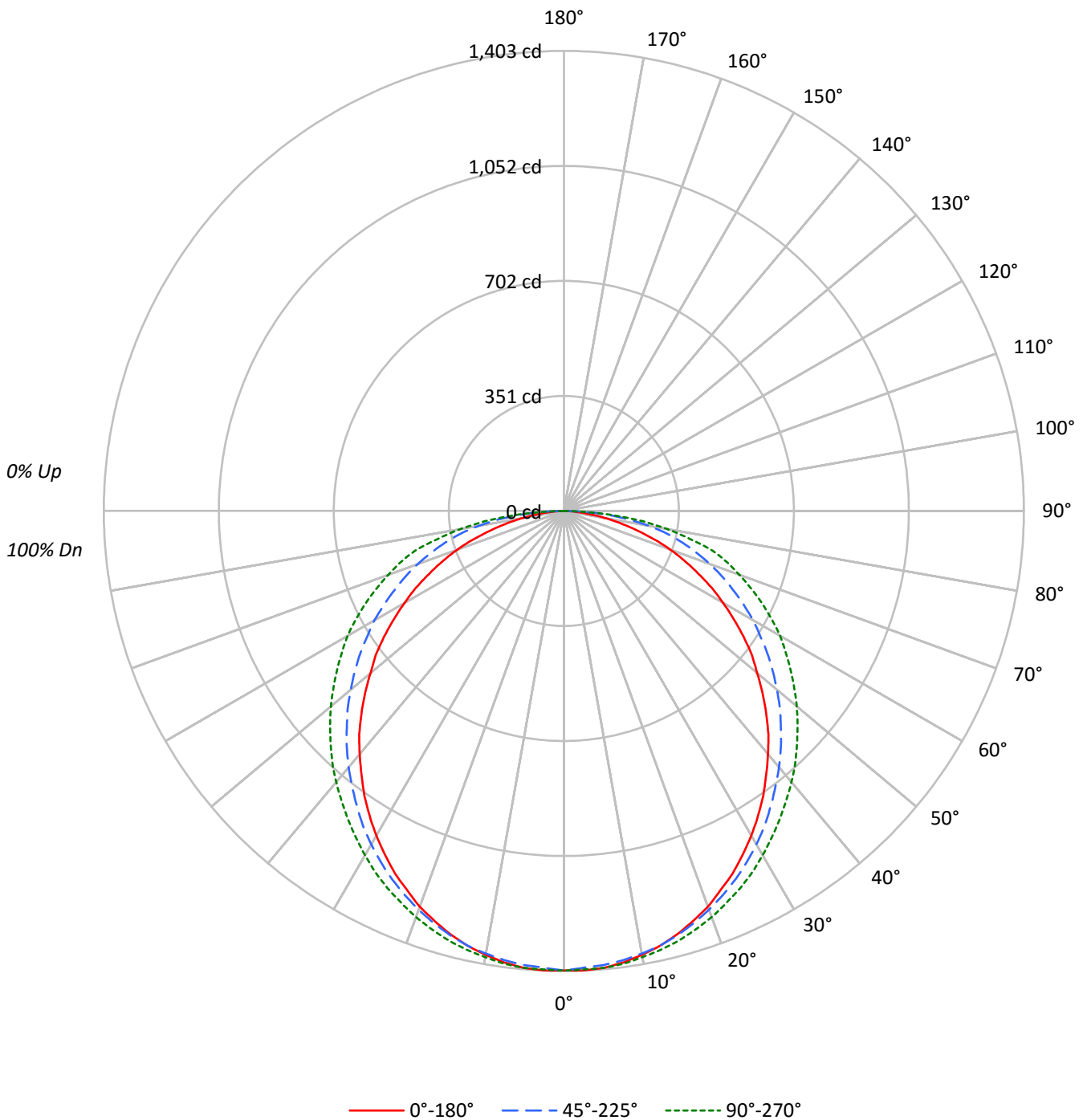
Input Watts (W): 34.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1885	1885	1885
5°	1889	1877	1889
10°	1878	1872	1887
15°	1862	1866	1889
20°	1839	1853	1887
25°	1810	1840	1886
30°	1776	1824	1884
35°	1741	1806	1885
40°	1701	1793	1897
45°	1660	1781	1913
50°	1611	1777	1942
55°	1571	1779	1981
60°	1510	1794	2049
65°	1441	1813	2123
70°	1364	1869	2240
75°	1216	1949	2448
80°	1038	2064	2501
85°	739	2046	2394



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.6	3.1
10°-20°	379.2	8.9
20°-30°	572.7	13.5
30°-40°	690.3	16.2
40°-50°	724.7	17.1
50°-60°	678.0	16.0
60°-70°	559.9	13.2
70°-80°	381.5	9.0
80°-90°	130.1	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°	1084.6	25.5
0°-40°	1774.8	41.8
0°-60°	3177.5	74.8
0°-90°	4249.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4249.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1401	1401	1401	1401	1401	
5°	1398	1397	1390	1398	1398	133
15°	1336	1338	1339	1353	1356	377
25°	1219	1225	1239	1263	1270	561
35°	1060	1071	1100	1136	1148	662
45°	873	891	936	987	1005	673
55°	670	696	758	820	844	598
65°	452	491	570	641	667	449
75°	234	288	375	446	471	250
85°	48	94	132	149	155	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1401.3	1401.3	1401.3	1401.3	1401.3
2.5°	1402.7	1401.3	1394.2	1401.3	1399.9
5°	1398.5	1397.1	1390.0	1398.5	1398.5
7.5°	1388.6	1388.6	1381.5	1391.4	1392.8
10°	1374.5	1374.5	1370.3	1381.5	1381.5
12.5°	1357.6	1357.6	1357.6	1368.9	1370.3
15°	1336.4	1337.8	1339.3	1353.4	1356.2
17.5°	1311.1	1313.9	1318.1	1335.0	1337.8
20°	1284.3	1287.1	1294.1	1313.9	1318.1
22.5°	1250.4	1257.5	1267.4	1289.9	1294.1
25°	1219.4	1225.1	1239.2	1263.1	1270.2
27.5°	1181.4	1189.8	1208.1	1233.5	1243.4
30°	1143.3	1151.8	1174.3	1203.9	1212.4
32.5°	1102.4	1115.1	1139.1	1170.1	1180.0
35°	1060.1	1071.4	1099.6	1136.3	1147.5
37.5°	1013.6	1029.1	1060.1	1099.6	1113.7
40°	968.5	985.4	1020.7	1062.9	1079.9
42.5°	923.4	940.3	979.8	1027.7	1044.6
45°	872.6	891.0	936.1	986.8	1005.1
47.5°	821.9	844.4	893.8	947.3	967.1
50°	769.7	795.1	848.7	905.1	927.6
52.5°	723.2	747.2	803.6	864.2	885.3
55°	669.6	696.4	758.4	820.5	844.4
57.5°	614.6	644.3	710.5	778.2	802.1
60°	561.1	593.5	666.8	734.5	761.3
62.5°	508.9	541.3	617.5	688.0	714.7
65°	452.5	490.6	569.5	641.4	666.8
67.5°	399.0	439.8	523.0	593.5	618.9
70°	346.8	386.3	475.1	544.2	569.5
72.5°	290.4	335.5	424.3	496.2	523.0
75°	234.0	287.6	375.0	445.5	470.9
77.5°	181.9	236.8	324.2	382.0	394.7
80°	133.9	190.3	266.4	307.3	322.8
82.5°	86.0	142.4	203.0	232.6	245.3
85°	47.9	94.5	132.5	149.4	155.1
87.5°	19.7	40.9	53.6	60.6	60.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)