

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: P309736

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-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: P309736
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: 24FCZ2-70HE-UNV-L82765-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: 4760.0 lumens
Efficiency: N/A
Efficacy: 82.1 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

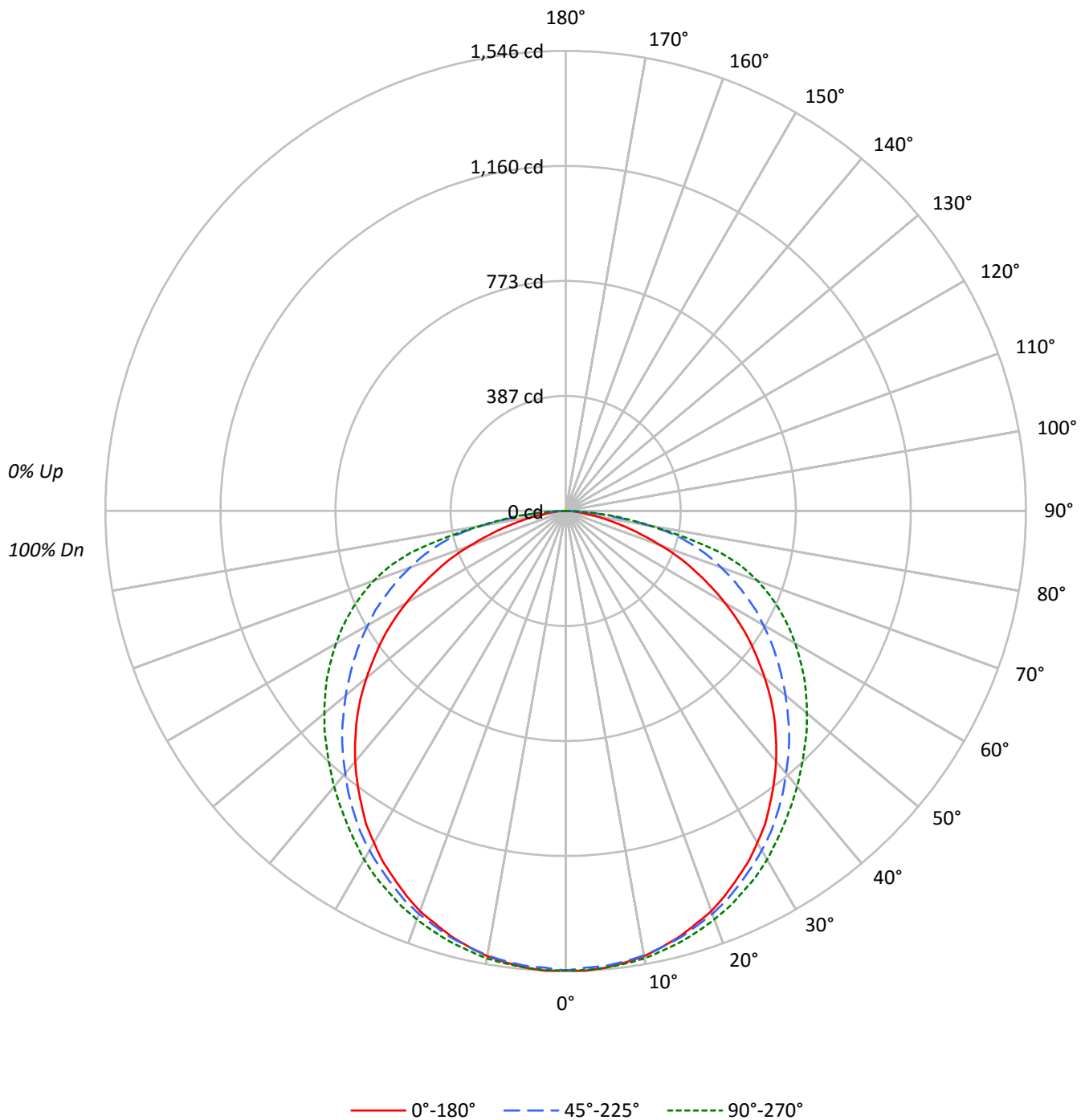
Input Watts (W): 58
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2078	2078	2078
5°	2081	2072	2081
10°	2075	2072	2086
15°	2062	2068	2087
20°	2049	2063	2091
25°	2023	2053	2095
30°	2000	2046	2102
35°	1967	2036	2105
40°	1932	2023	2125
45°	1888	2021	2158
50°	1827	2019	2215
55°	1762	2033	2295
60°	1662	2065	2397
65°	1535	2113	2531
70°	1341	2187	2697
75°	1088	2300	2787
80°	803	2254	2254
85°	616	1661	1877



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.3	3.1
10°-20°	420.1	8.8
20°-30°	639.6	13.4
30°-40°	776.6	16.3
40°-50°	820.5	17.2
50°-60°	774.2	16.3
60°-70°	643.7	13.5
70°-80°	423.5	8.9
80°-90°	115.5	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°	1206.0	25.3
0°-40°	1982.6	41.7
0°-60°	3577.3	75.2
0°-90°	4760.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4760.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1544	1544	1544	1544	1544	
5°	1540	1540	1534	1540	1540	146
15°	1481	1483	1485	1499	1499	418
25°	1363	1371	1383	1407	1411	629
35°	1198	1212	1240	1271	1281	750
45°	992	1012	1062	1114	1134	764
55°	751	783	867	949	978	669
65°	482	538	664	761	795	477
75°	209	305	442	524	536	225
85°	40	88	108	120	122	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1544.4	1544.4	1544.4	1544.4	1544.4
2.5°	1546.4	1544.4	1536.4	1544.4	1544.4
5°	1540.4	1540.4	1534.4	1540.4	1540.4
7.5°	1530.4	1530.4	1526.5	1534.4	1534.4
10°	1518.5	1518.5	1516.5	1526.5	1526.5
12.5°	1500.5	1502.5	1500.5	1512.5	1512.5
15°	1480.6	1482.6	1484.6	1498.6	1498.6
17.5°	1454.7	1458.7	1462.7	1478.6	1480.6
20°	1430.8	1432.8	1440.8	1458.7	1460.7
22.5°	1398.9	1404.9	1414.9	1432.8	1438.8
25°	1363.0	1371.0	1383.0	1406.9	1410.9
27.5°	1329.2	1335.1	1351.1	1377.0	1385.0
30°	1287.3	1297.3	1317.2	1343.1	1353.1
32.5°	1247.5	1257.4	1281.3	1309.2	1317.2
35°	1197.6	1211.6	1239.5	1271.4	1281.3
37.5°	1149.8	1163.8	1197.6	1233.5	1245.5
40°	1100.0	1115.9	1151.8	1193.7	1209.6
42.5°	1046.2	1068.1	1108.0	1153.8	1171.7
45°	992.4	1012.3	1062.1	1114.0	1133.9
47.5°	934.6	958.5	1012.3	1074.1	1098.0
50°	872.8	902.7	964.5	1032.2	1058.2
52.5°	811.1	844.9	914.7	990.4	1018.3
55°	751.3	783.2	866.8	948.6	978.4
57.5°	685.5	725.4	817.0	904.7	934.6
60°	617.8	661.6	767.2	858.9	890.8
62.5°	550.0	599.8	719.4	811.1	844.9
65°	482.2	538.0	663.6	761.2	795.1
67.5°	416.5	478.3	611.8	709.4	743.3
70°	340.8	418.5	556.0	651.6	685.5
72.5°	271.0	360.7	502.2	591.8	621.7
75°	209.2	304.9	442.4	524.1	536.1
77.5°	153.4	249.1	380.6	408.5	410.5
80°	103.6	199.3	290.9	287.0	290.9
82.5°	67.8	149.5	183.3	205.3	207.2
85°	39.9	87.7	107.6	119.6	121.6
87.5°	19.9	29.9	37.9	39.9	43.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)