

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: P309743

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-HRP-CP125-W2A-U-2700K**

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: P309743  
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-CP125-W2A-U-2700K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 2700K 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: 4384.0 lumens  
Efficiency: N/A  
Efficacy: 76.0 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

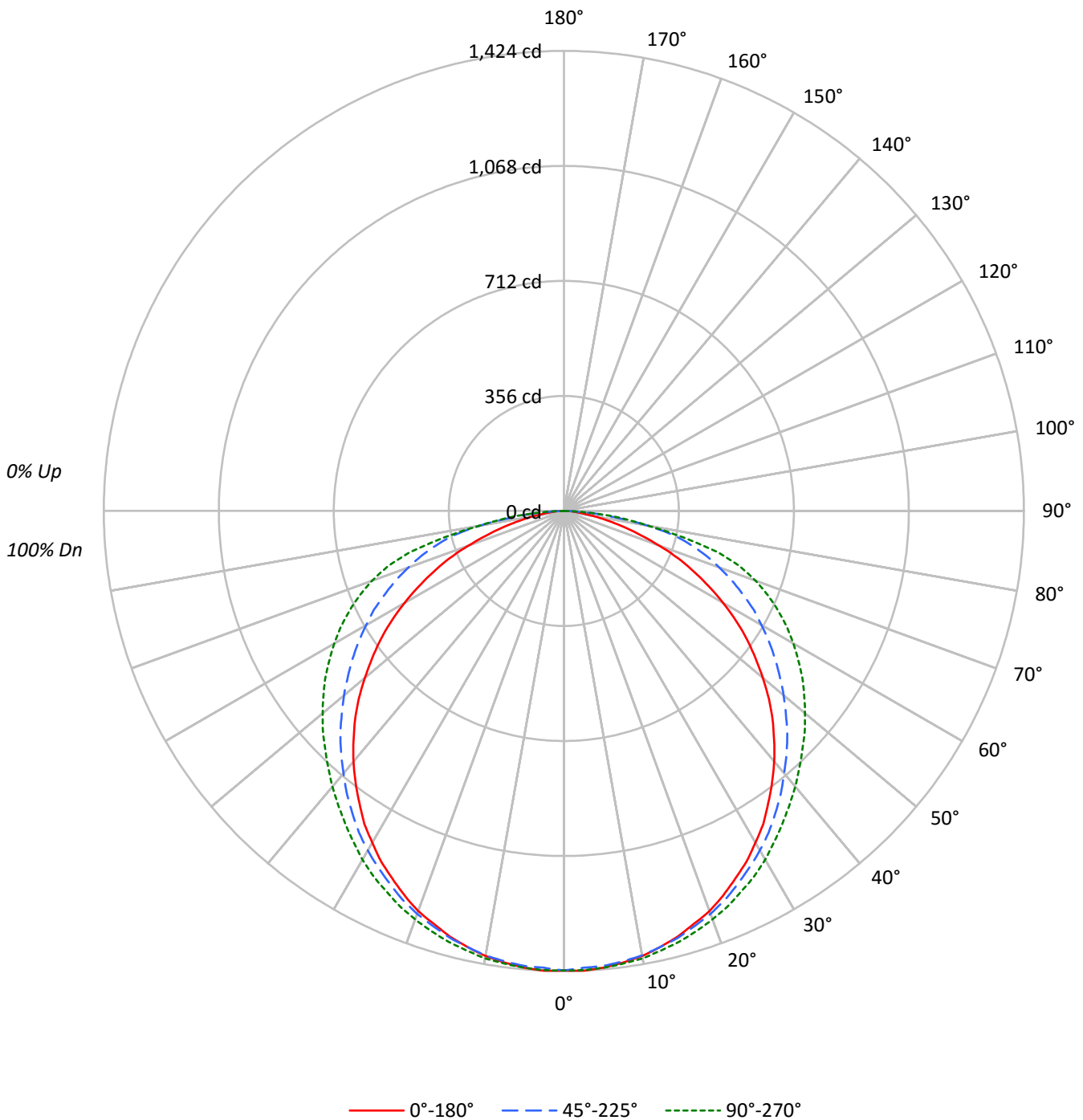
Input Watts (W): 57.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1914	1914	1914
5°	1916	1909	1916
10°	1911	1908	1921
15°	1900	1905	1923
20°	1887	1900	1926
25°	1864	1891	1929
30°	1842	1885	1936
35°	1812	1875	1938
40°	1779	1863	1957
45°	1739	1861	1987
50°	1683	1859	2040
55°	1623	1873	2114
60°	1531	1901	2208
65°	1414	1946	2331
70°	1234	2015	2484
75°	1002	2118	2567
80°	739	2077	2077
85°	567	1530	1729



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	134.7	3.1
10°-20°	386.9	8.8
20°-30°	589.1	13.4
30°-40°	715.3	16.3
40°-50°	755.7	17.2
50°-60°	713.1	16.3
60°-70°	592.9	13.5
70°-80°	390.1	8.9
80°-90°	106.3	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°	1110.7	25.3
0°-40°	1826.0	41.7
0°-60°	3294.7	75.2
0°-90°	4384.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4384.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1422	1422	1422	1422	1422	
5°	1419	1419	1413	1419	1419	135
15°	1364	1366	1367	1380	1380	385
25°	1255	1263	1274	1296	1299	579
35°	1103	1116	1142	1171	1180	690
45°	914	932	978	1026	1044	704
55°	692	721	798	874	901	616
65°	444	496	611	701	732	439
75°	193	281	407	483	494	208
85°	37	81	99	110	112	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1422.4	1422.4	1422.4	1422.4	1422.4
2.5°	1424.2	1422.4	1415.1	1422.4	1422.4
5°	1418.7	1418.7	1413.2	1418.7	1418.7
7.5°	1409.5	1409.5	1405.9	1413.2	1413.2
10°	1398.5	1398.5	1396.7	1405.9	1405.9
12.5°	1382.0	1383.8	1382.0	1393.0	1393.0
15°	1363.7	1365.5	1367.3	1380.2	1380.2
17.5°	1339.8	1343.5	1347.1	1361.8	1363.7
20°	1317.8	1319.6	1327.0	1343.5	1345.3
22.5°	1288.4	1293.9	1303.1	1319.6	1325.1
25°	1255.4	1262.7	1273.7	1295.8	1299.4
27.5°	1224.2	1229.7	1244.4	1268.2	1275.6
30°	1185.6	1194.8	1213.2	1237.0	1246.2
32.5°	1148.9	1158.1	1180.1	1205.8	1213.2
35°	1103.0	1115.9	1141.6	1170.9	1180.1
37.5°	1059.0	1071.8	1103.0	1136.1	1147.1
40°	1013.1	1027.8	1060.8	1099.4	1114.1
42.5°	963.6	983.7	1020.5	1062.7	1079.2
45°	914.0	932.4	978.2	1026.0	1044.3
47.5°	860.8	882.8	932.4	989.3	1011.3
50°	803.9	831.4	888.3	950.7	974.6
52.5°	747.0	778.2	842.4	912.2	937.9
55°	691.9	721.3	798.4	873.6	901.2
57.5°	631.4	668.1	752.5	833.2	860.8
60°	569.0	609.3	706.6	791.0	820.4
62.5°	506.6	552.4	662.6	747.0	778.2
65°	444.2	495.5	611.2	701.1	732.3
67.5°	383.6	440.5	563.5	653.4	684.6
70°	313.8	385.4	512.1	600.2	631.4
72.5°	249.6	332.2	462.5	545.1	572.6
75°	192.7	280.8	407.4	482.7	493.7
77.5°	141.3	229.4	350.6	376.2	378.1
80°	95.4	183.5	268.0	264.3	268.0
82.5°	62.4	137.7	168.9	189.0	190.9
85°	36.7	80.8	99.1	110.1	112.0
87.5°	18.4	27.5	34.9	36.7	40.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)