

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: P311146

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-CP125-W2A-U-6500K**

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: P311146  
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: 24FCZ2-75HE-UNV-L82765-CP125-W2A-U-6500K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 6500K 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**

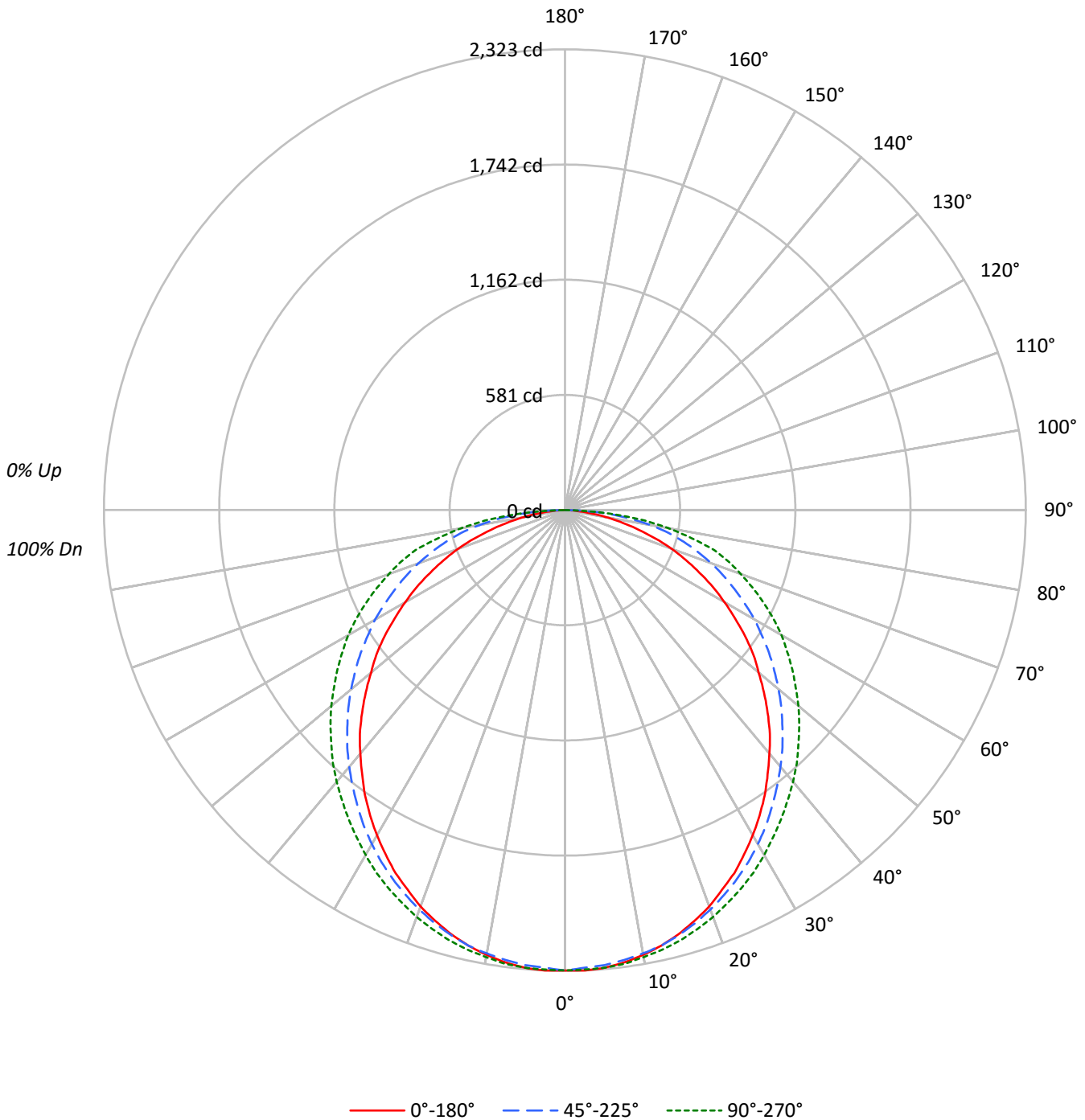
Lumens per Lamp: N/A  
Luminaire Lumens: 7038.0 lumens  
Efficiency: N/A  
Efficacy: 107.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 65.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	3123	3123	3123
5°	3129	3110	3129
10°	3111	3101	3127
15°	3084	3090	3129
20°	3046	3069	3126
25°	2999	3047	3123
30°	2942	3022	3120
35°	2884	2992	3122
40°	2818	2969	3142
45°	2750	2950	3168
50°	2669	2942	3216
55°	2602	2947	3281
60°	2501	2972	3393
65°	2387	3004	3516
70°	2260	3096	3711
75°	2015	3229	4054
80°	1719	3419	4143
85°	1226	3389	3966



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	219.7	3.1
10°-20°	628.1	8.9
20°-30°	948.7	13.5
30°-40°	1143.4	16.2
40°-50°	1200.4	17.1
50°-60°	1123.0	16.0
60°-70°	927.4	13.2
70°-80°	631.9	9.0
80°-90°	215.5	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°	1796.4	25.5
0°-40°	2939.8	41.8
0°-60°	5263.2	74.8
0°-90°	7038.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7038.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2321	2321	2321	2321	2321	
5°	2316	2314	2302	2316	2316	220
15°	2214	2216	2218	2242	2246	624
25°	2020	2029	2052	2092	2104	929
35°	1756	1775	1821	1882	1901	1097
45°	1445	1476	1550	1635	1665	1115
55°	1109	1154	1256	1359	1399	990
65°	750	813	943	1062	1104	744
75°	388	476	621	738	780	413
85°	79	156	220	248	257	99
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2321.1	2321.1	2321.1	2321.1	2321.1
2.5°	2323.4	2321.1	2309.4	2321.1	2318.7
5°	2316.4	2314.1	2302.4	2316.4	2316.4
7.5°	2300.1	2300.1	2288.4	2304.7	2307.1
10°	2276.7	2276.7	2269.7	2288.4	2288.4
12.5°	2248.7	2248.7	2248.7	2267.4	2269.7
15°	2213.7	2216.0	2218.3	2241.7	2246.3
17.5°	2171.6	2176.3	2183.3	2211.3	2216.0
20°	2127.3	2131.9	2143.6	2176.3	2183.3
22.5°	2071.2	2082.9	2099.2	2136.6	2143.6
25°	2019.8	2029.2	2052.5	2092.2	2103.9
27.5°	1956.8	1970.8	2001.2	2043.2	2059.5
30°	1893.8	1907.8	1945.1	1994.2	2008.2
32.5°	1826.0	1847.0	1886.7	1938.1	1954.5
35°	1756.0	1774.7	1821.4	1882.1	1900.8
37.5°	1678.9	1704.6	1756.0	1821.4	1844.7
40°	1604.2	1632.2	1690.6	1760.7	1788.7
42.5°	1529.5	1557.5	1622.9	1702.3	1730.3
45°	1445.4	1475.8	1550.5	1634.6	1664.9
47.5°	1361.4	1398.7	1480.4	1569.2	1601.9
50°	1275.0	1317.0	1405.7	1499.1	1536.5
52.5°	1197.9	1237.6	1331.0	1431.4	1466.4
55°	1109.2	1153.5	1256.3	1359.0	1398.7
57.5°	1018.1	1067.1	1176.9	1289.0	1328.7
60°	929.4	983.1	1104.5	1216.6	1260.9
62.5°	843.0	896.7	1022.8	1139.5	1183.9
65°	749.6	812.6	943.4	1062.5	1104.5
67.5°	660.8	728.5	866.3	983.1	1025.1
70°	574.4	639.8	786.9	901.3	943.4
72.5°	481.0	555.7	702.9	821.9	866.3
75°	387.6	476.4	621.1	737.9	779.9
77.5°	301.2	392.3	537.1	632.8	653.8
80°	221.8	315.2	441.3	509.0	534.7
82.5°	142.4	235.8	336.3	385.3	406.3
85°	79.4	156.5	219.5	247.5	256.9
87.5°	32.7	67.7	88.7	100.4	100.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)