

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: P311835

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-CP250-W2A-U-4500K**

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: P311835  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
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-S-CP250-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET  
Light Source: (336) 4500K 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: 6827.0 lumens  
Efficiency: N/A  
Efficacy: 106.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

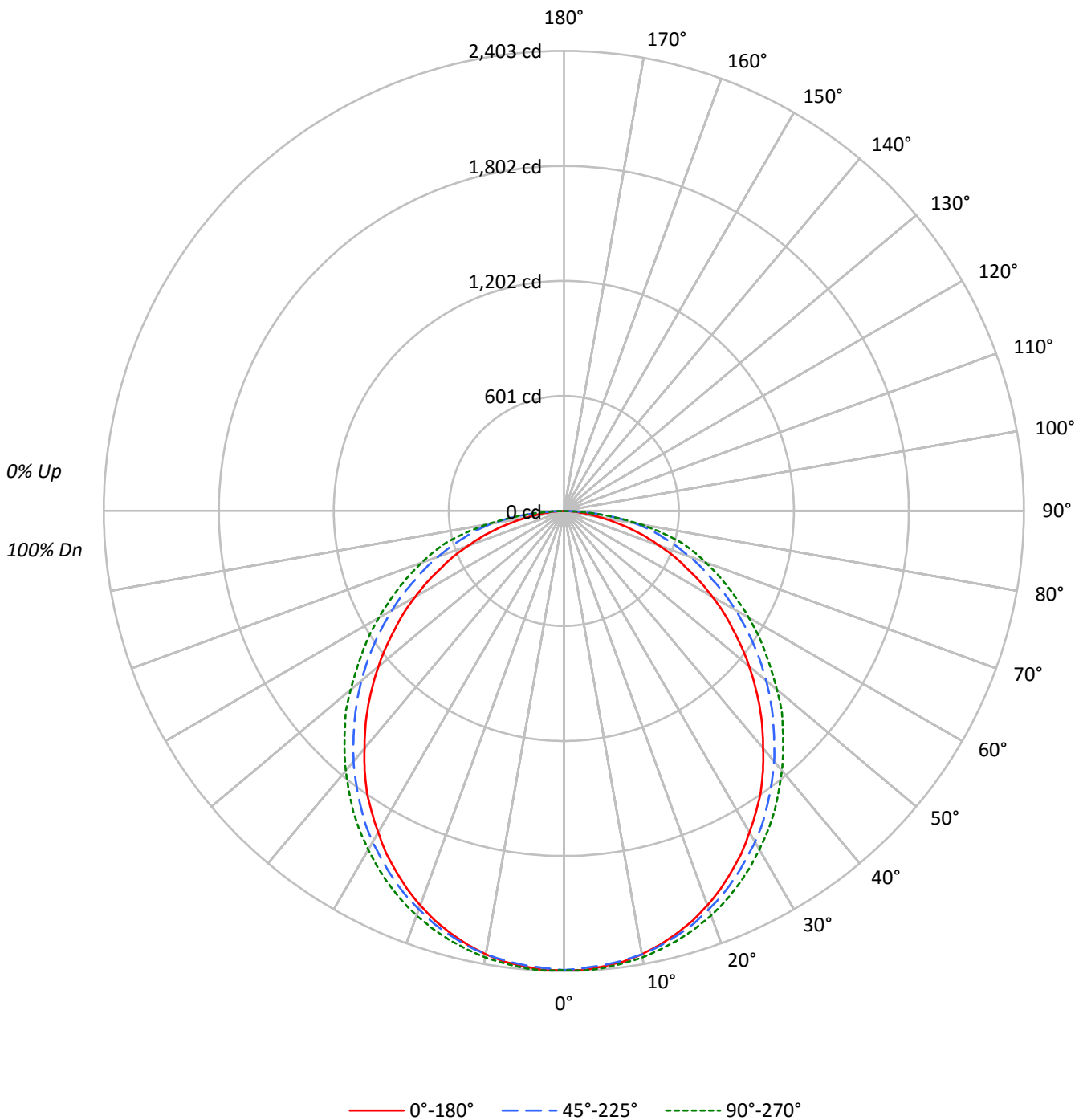
Input Watts (W): 64  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3227	3227	3227
5°	3225	3216	3236
10°	3212	3212	3235
15°	3181	3196	3229
20°	3139	3170	3220
25°	3081	3139	3200
30°	3012	3103	3174
35°	2946	3052	3149
40°	2845	3001	3112
45°	2752	2942	3078
50°	2646	2887	3041
55°	2528	2833	3012
60°	2410	2789	3005
65°	2258	2741	3024
70°	2090	2755	3105
75°	1871	2807	3280
80°	1512	2974	3209
85°	1138	2611	2544



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	227.1	3.3
10°-20°	648.8	9.5
20°-30°	975.3	14.3
30°-40°	1161.7	17.0
40°-50°	1188.9	17.4
50°-60°	1070.4	15.7
60°-70°	840.6	12.3
70°-80°	545.6	8.0
80°-90°	168.7	2.5
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°	1851.1	27.1
0°-40°	3012.8	44.1
0°-60°	5272.1	77.2
0°-90°	6827.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6827.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2398	2398	2398	2398	2398	
5°	2388	2392	2381	2394	2396	227
15°	2283	2290	2294	2314	2318	644
25°	2075	2093	2114	2149	2156	956
35°	1793	1815	1858	1904	1917	1119
45°	1446	1481	1546	1605	1618	1115
55°	1078	1126	1208	1271	1284	966
65°	709	763	861	932	950	706
75°	360	429	540	614	631	381
85°	74	137	169	165	165	89
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2398.4	2398.4	2398.4	2398.4	2398.4
2.5°	2400.5	2400.5	2389.7	2400.5	2402.7
5°	2387.5	2391.9	2381.0	2394.0	2396.2
7.5°	2374.5	2374.5	2368.0	2381.0	2383.2
10°	2350.7	2352.8	2350.7	2365.8	2368.0
12.5°	2320.3	2324.6	2326.8	2342.0	2344.2
15°	2283.4	2289.9	2294.3	2313.8	2318.1
17.5°	2242.2	2248.7	2259.6	2281.3	2285.6
20°	2192.4	2201.0	2214.0	2242.2	2248.7
22.5°	2138.1	2146.8	2168.5	2194.5	2205.4
25°	2075.3	2092.6	2114.3	2149.0	2155.5
27.5°	2012.4	2027.6	2055.7	2092.6	2101.3
30°	1938.6	1962.5	1997.2	2034.1	2042.7
32.5°	1867.1	1890.9	1932.1	1971.2	1982.0
35°	1793.4	1815.0	1858.4	1903.9	1917.0
37.5°	1708.8	1737.0	1784.7	1830.2	1843.2
40°	1619.9	1654.6	1708.8	1756.5	1771.7
42.5°	1535.3	1572.2	1626.4	1678.4	1695.8
45°	1446.4	1481.1	1546.1	1604.7	1617.7
47.5°	1355.3	1394.4	1463.7	1522.3	1544.0
50°	1264.2	1305.4	1379.2	1439.9	1452.9
52.5°	1173.2	1216.5	1294.6	1359.7	1366.2
55°	1077.7	1125.5	1207.9	1270.7	1283.8
57.5°	991.0	1032.2	1121.1	1186.2	1201.4
60°	895.6	941.1	1036.5	1097.3	1116.8
62.5°	804.5	852.2	952.0	1012.7	1030.0
65°	709.1	763.3	860.9	932.5	949.8
67.5°	626.7	678.7	782.8	852.2	869.6
70°	531.3	589.8	700.4	772.0	789.3
72.5°	448.9	509.6	620.2	689.6	715.6
75°	360.0	429.4	540.0	613.7	631.0
77.5°	273.2	353.5	466.2	522.6	522.6
80°	195.2	279.7	383.8	409.8	414.2
82.5°	127.9	210.3	284.1	281.9	281.9
85°	73.7	136.6	169.1	164.8	164.8
87.5°	28.2	56.4	60.7	60.7	58.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)