

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: P311371

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-S-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: P311371  
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: 24FCZ2-40HE-UNV-L82765-S-CP125-W2A-U-6500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH 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**

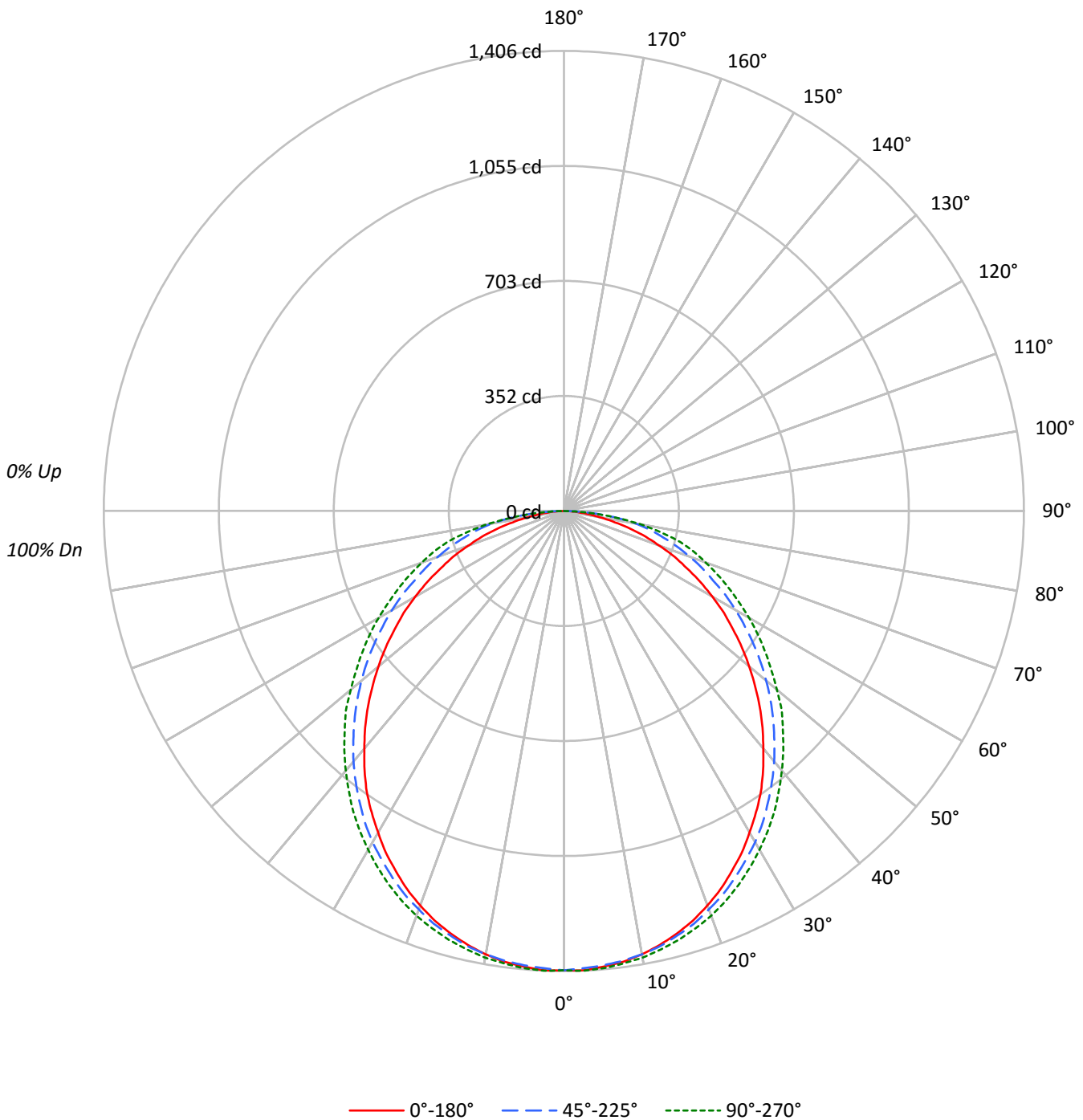
Lumens per Lamp: N/A  
Luminaire Lumens: 3996.0 lumens  
Efficiency: N/A  
Efficacy: 125.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1889	1889	1889
5°	1888	1882	1894
10°	1880	1880	1894
15°	1862	1871	1890
20°	1837	1856	1885
25°	1803	1837	1873
30°	1763	1816	1858
35°	1724	1787	1843
40°	1665	1757	1821
45°	1611	1722	1802
50°	1549	1690	1780
55°	1480	1658	1763
60°	1411	1633	1759
65°	1322	1604	1770
70°	1223	1613	1817
75°	1095	1643	1920
80°	885	1741	1878
85°	667	1528	1490



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	132.9	3.3
10°-20°	379.7	9.5
20°-30°	570.8	14.3
30°-40°	680.0	17.0
40°-50°	695.9	17.4
50°-60°	626.5	15.7
60°-70°	492.0	12.3
70°-80°	319.3	8.0
80°-90°	98.8	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°	1083.5	27.1
0°-40°	1763.5	44.1
0°-60°	3085.9	77.2
0°-90°	3996.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3996.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1404	1404	1404	1404	1404	
5°	1398	1400	1394	1401	1403	133
15°	1336	1340	1343	1354	1357	377
25°	1215	1225	1238	1258	1262	560
35°	1050	1062	1088	1114	1122	655
45°	847	867	905	939	947	653
55°	631	659	707	744	751	566
65°	415	447	504	546	556	413
75°	211	251	316	359	369	223
85°	43	80	99	96	96	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1403.8	1403.8	1403.8	1403.8	1403.8
2.5°	1405.1	1405.1	1398.7	1405.1	1406.4
5°	1397.5	1400.0	1393.7	1401.3	1402.6
7.5°	1389.9	1389.9	1386.1	1393.7	1394.9
10°	1375.9	1377.2	1375.9	1384.8	1386.1
12.5°	1358.1	1360.7	1361.9	1370.8	1372.1
15°	1336.5	1340.4	1342.9	1354.3	1356.9
17.5°	1312.4	1316.2	1322.6	1335.3	1337.8
20°	1283.2	1288.3	1295.9	1312.4	1316.2
22.5°	1251.5	1256.6	1269.3	1284.5	1290.9
25°	1214.7	1224.9	1237.5	1257.9	1261.7
27.5°	1177.9	1186.8	1203.3	1224.9	1229.9
30°	1134.7	1148.7	1169.0	1190.6	1195.7
32.5°	1092.8	1106.8	1130.9	1153.8	1160.1
35°	1049.7	1062.4	1087.8	1114.4	1122.0
37.5°	1000.2	1016.7	1044.6	1071.3	1078.9
40°	948.2	968.5	1000.2	1028.1	1037.0
42.5°	898.6	920.2	952.0	982.4	992.6
45°	846.6	866.9	905.0	939.3	946.9
47.5°	793.3	816.1	856.8	891.0	903.7
50°	740.0	764.1	807.3	842.8	850.4
52.5°	686.7	712.1	757.8	795.8	799.6
55°	630.8	658.8	707.0	743.8	751.4
57.5°	580.1	604.2	656.2	694.3	703.2
60°	524.2	550.9	606.7	642.3	653.7
62.5°	470.9	498.8	557.2	592.8	602.9
65°	415.1	446.8	503.9	545.8	555.9
67.5°	366.8	397.3	458.2	498.8	509.0
70°	311.0	345.2	410.0	451.9	462.0
72.5°	262.7	298.3	363.0	403.6	418.9
75°	210.7	251.3	316.1	359.2	369.4
77.5°	159.9	206.9	272.9	305.9	305.9
80°	114.2	163.7	224.7	239.9	242.4
82.5°	74.9	123.1	166.3	165.0	165.0
85°	43.2	80.0	99.0	96.5	96.5
87.5°	16.5	33.0	35.5	35.5	34.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)