

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: P314277

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-S-CP125-W2A-U-4000K**

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: P314277  
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-L83050-S-CP125-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 4000K 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

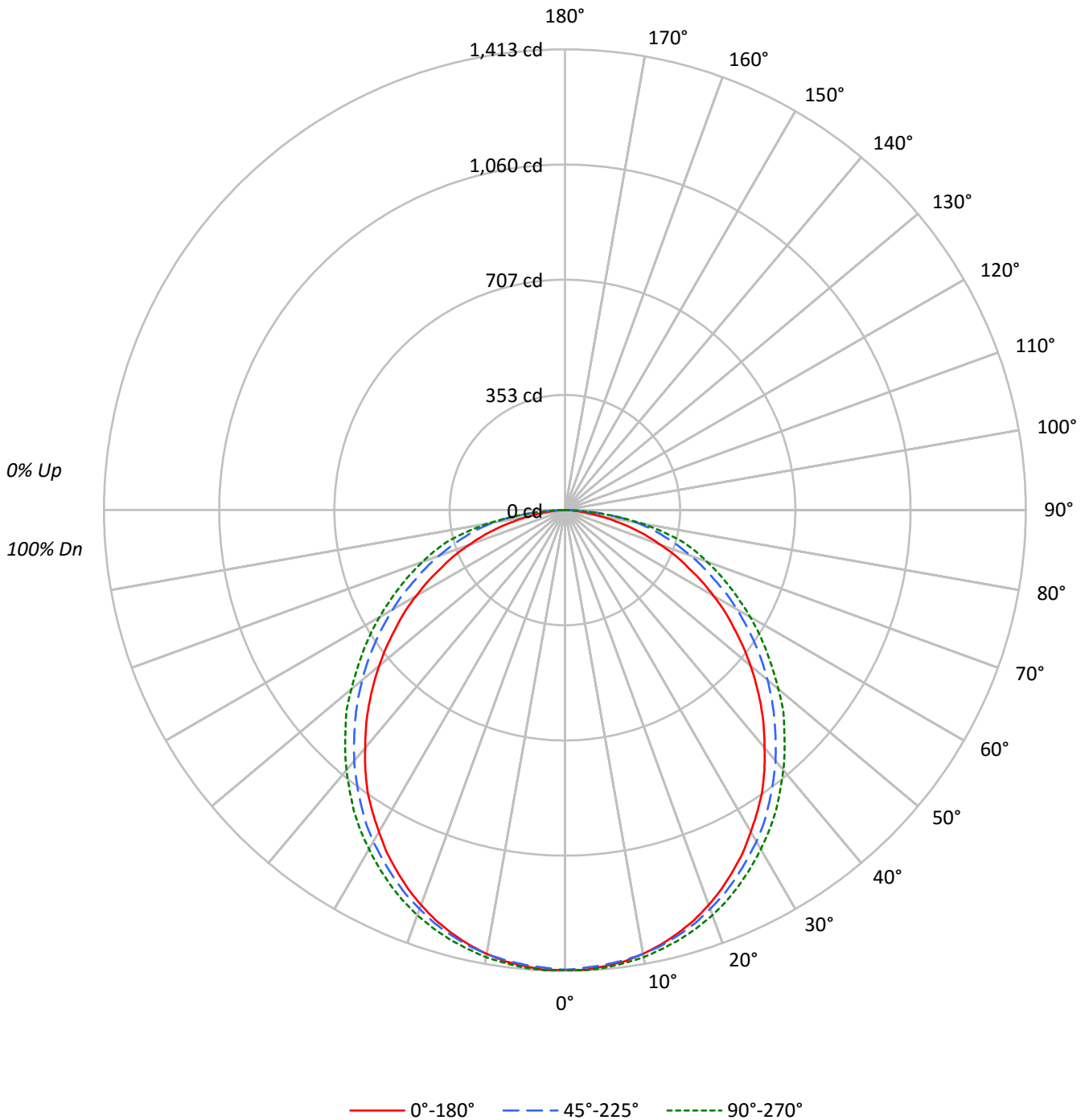
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4013.9 lumens  
Efficiency: N/A  
Efficacy: 129.1 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): 31.1  
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



TEST NUMBER: P314277  
CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-S-CP125-W2A-U-4000K

### Luminous Intensity Polar Plot





TEST NUMBER: P314277

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-S-CP125-W2A-U-4000K

**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°	1897	1897	1897
5°	1896	1891	1903
10°	1888	1888	1902
15°	1870	1879	1899
20°	1846	1864	1893
25°	1811	1845	1881
30°	1771	1824	1866
35°	1732	1795	1851
40°	1673	1765	1830
45°	1618	1730	1810
50°	1556	1697	1788
55°	1487	1666	1771
60°	1417	1640	1767
65°	1327	1612	1778
70°	1229	1620	1826
75°	1100	1651	1929
80°	889	1749	1887
85°	668	1535	1496



TEST NUMBER: P314277

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-S-CP125-W2A-U-4000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	133.5	3.3
10°-20°	381.5	9.5
20°-30°	573.4	14.3
30°-40°	683.0	17.0
40°-50°	699.0	17.4
50°-60°	629.3	15.7
60°-70°	494.2	12.3
70°-80°	320.8	8.0
80°-90°	99.2	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°	1088.4	27.1
0°-40°	1771.4	44.1
0°-60°	3099.8	77.2
0°-90°	4013.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4013.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1410	1410	1410	1410	1410	
5°	1404	1406	1400	1408	1409	133
15°	1343	1346	1349	1360	1363	379
25°	1220	1230	1243	1264	1267	562
35°	1054	1067	1093	1119	1127	658
45°	850	871	909	944	951	656
55°	634	662	710	747	755	568
65°	417	449	506	548	558	415
75°	212	252	318	361	371	224
85°	43	80	99	97	97	52
90°	0	0	0	0	0	



TEST NUMBER: P314277

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-S-CP125-W2A-U-4000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1410.1	1410.1	1410.1	1410.1	1410.1
2.5°	1411.4	1411.4	1405.0	1411.4	1412.7
5°	1403.8	1406.3	1399.9	1407.6	1408.9
7.5°	1396.1	1396.1	1392.3	1399.9	1401.2
10°	1382.1	1383.4	1382.1	1391.0	1392.3
12.5°	1364.2	1366.8	1368.1	1377.0	1378.3
15°	1342.6	1346.4	1348.9	1360.4	1363.0
17.5°	1318.3	1322.2	1328.5	1341.3	1343.8
20°	1289.0	1294.1	1301.8	1318.3	1322.2
22.5°	1257.1	1262.2	1275.0	1290.3	1296.7
25°	1220.2	1230.4	1243.1	1263.5	1267.3
27.5°	1183.2	1192.1	1208.7	1230.4	1235.5
30°	1139.8	1153.9	1174.3	1195.9	1201.0
32.5°	1097.8	1111.8	1136.0	1159.0	1165.3
35°	1054.4	1067.2	1092.7	1119.4	1127.1
37.5°	1004.7	1021.3	1049.3	1076.1	1083.7
40°	952.4	972.8	1004.7	1032.7	1041.7
42.5°	902.7	924.4	956.2	986.8	997.0
45°	850.4	870.8	909.1	943.5	951.1
47.5°	796.9	819.8	860.6	895.0	907.8
50°	743.3	767.5	810.9	846.6	854.2
52.5°	689.8	715.3	761.2	799.4	803.2
55°	633.7	661.7	710.2	747.1	754.8
57.5°	582.7	606.9	659.2	697.4	706.3
60°	526.6	553.3	609.4	645.1	656.6
62.5°	473.0	501.1	559.7	595.4	605.6
65°	416.9	448.8	506.2	548.2	558.4
67.5°	368.5	399.1	460.3	501.1	511.3
70°	312.4	346.8	411.8	453.9	464.1
72.5°	263.9	299.6	364.6	405.4	420.7
75°	211.6	252.4	317.5	360.8	371.0
77.5°	160.6	207.8	274.1	307.3	307.3
80°	114.7	164.5	225.7	241.0	243.5
82.5°	75.2	123.7	167.0	165.7	165.7
85°	43.3	80.3	99.4	96.9	96.9
87.5°	16.6	33.1	35.7	35.7	34.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)