

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: P314273

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-S-CA125-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: P314273  
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-CA125-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC 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**

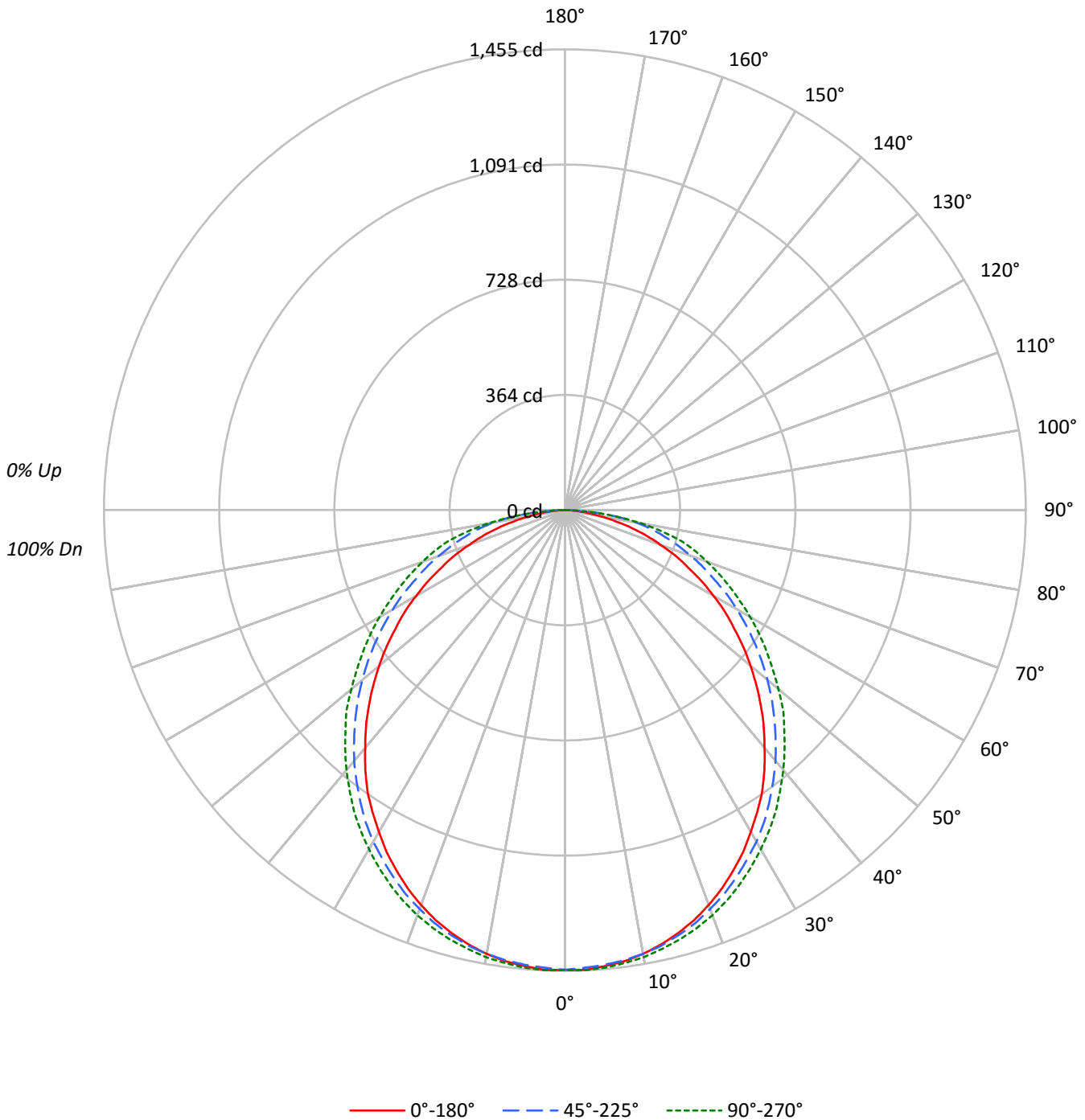
Lumens per Lamp: N/A  
Luminaire Lumens: 4133.0 lumens  
Efficiency: N/A  
Efficacy: 129.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.9  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1954	1954	1954
5°	1952	1947	1959
10°	1944	1944	1959
15°	1926	1935	1955
20°	1900	1919	1949
25°	1865	1900	1937
30°	1823	1879	1921
35°	1783	1848	1906
40°	1723	1817	1884
45°	1666	1781	1863
50°	1602	1748	1841
55°	1531	1715	1823
60°	1459	1689	1819
65°	1367	1659	1831
70°	1265	1668	1880
75°	1133	1699	1986
80°	916	1801	1943
85°	689	1581	1541



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	137.5	3.3
10°-20°	392.8	9.5
20°-30°	590.4	14.3
30°-40°	703.3	17.0
40°-50°	719.8	17.4
50°-60°	648.0	15.7
60°-70°	508.9	12.3
70°-80°	330.3	8.0
80°-90°	102.2	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°	1120.6	27.1
0°-40°	1823.9	44.1
0°-60°	3191.7	77.2
0°-90°	4133.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4133.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1452	1452	1452	1452	1452	
5°	1445	1448	1441	1449	1451	137
15°	1382	1386	1389	1401	1403	390
25°	1256	1267	1280	1301	1305	579
35°	1086	1099	1125	1153	1160	677
45°	876	897	936	972	979	675
55°	652	681	731	769	777	585
65°	429	462	521	564	575	427
75°	218	260	327	372	382	231
85°	45	83	102	100	100	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1451.9	1451.9	1451.9	1451.9	1451.9
2.5°	1453.3	1453.3	1446.7	1453.3	1454.6
5°	1445.4	1448.0	1441.4	1449.3	1450.6
7.5°	1437.5	1437.5	1433.6	1441.4	1442.8
10°	1423.1	1424.4	1423.1	1432.3	1433.6
12.5°	1404.7	1407.3	1408.6	1417.8	1419.1
15°	1382.4	1386.3	1388.9	1400.8	1403.4
17.5°	1357.4	1361.4	1367.9	1381.1	1383.7
20°	1327.2	1332.5	1340.4	1357.4	1361.4
22.5°	1294.4	1299.7	1312.8	1328.5	1335.1
25°	1256.3	1266.8	1280.0	1301.0	1304.9
27.5°	1218.3	1227.5	1244.5	1266.8	1272.1
30°	1173.6	1188.1	1209.1	1231.4	1236.7
32.5°	1130.3	1144.8	1169.7	1193.3	1199.9
35°	1085.7	1098.8	1125.1	1152.6	1160.5
37.5°	1034.5	1051.5	1080.4	1108.0	1115.9
40°	980.7	1001.7	1034.5	1063.4	1072.6
42.5°	929.5	951.8	984.6	1016.1	1026.6
45°	875.6	896.6	936.0	971.5	979.3
47.5°	820.5	844.1	886.1	921.6	934.7
50°	765.4	790.3	834.9	871.7	879.6
52.5°	710.2	736.5	783.7	823.1	827.1
55°	652.5	681.3	731.2	769.3	777.2
57.5°	599.9	624.9	678.7	718.1	727.3
60°	542.2	569.8	627.5	664.3	676.1
62.5°	487.0	515.9	576.3	613.1	623.6
65°	429.3	462.1	521.2	564.5	575.0
67.5°	379.4	410.9	473.9	515.9	526.4
70°	321.6	357.1	424.0	467.4	477.9
72.5°	271.7	308.5	375.5	417.5	433.2
75°	217.9	259.9	326.9	371.5	382.0
77.5°	165.4	214.0	282.3	316.4	316.4
80°	118.2	169.4	232.4	248.1	250.7
82.5°	77.5	127.3	172.0	170.7	170.7
85°	44.6	82.7	102.4	99.8	99.8
87.5°	17.1	34.1	36.8	36.8	35.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)