

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: P310682

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-CA125-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: P310682  
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: 24FCZ2-40HE-UNV-L82765-CA125-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC 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**

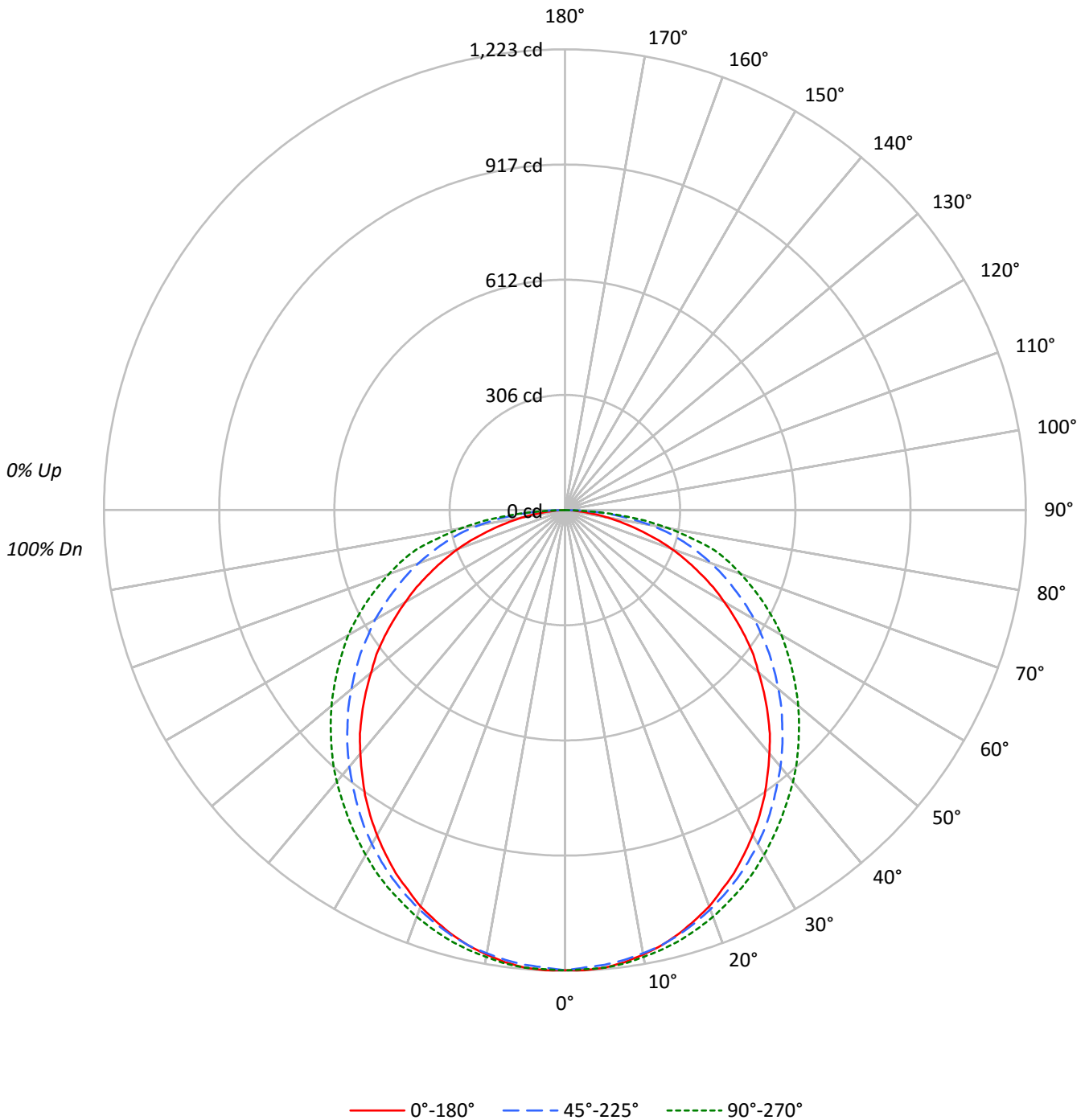
Lumens per Lamp: N/A  
Luminaire Lumens: 3704.0 lumens  
Efficiency: N/A  
Efficacy: 120.3 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 30.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	1644	1644	1644
5°	1647	1637	1647
10°	1637	1632	1645
15°	1623	1626	1647
20°	1603	1615	1645
25°	1578	1604	1644
30°	1549	1590	1642
35°	1518	1575	1643
40°	1483	1563	1653
45°	1447	1553	1667
50°	1405	1549	1693
55°	1369	1551	1727
60°	1316	1564	1786
65°	1256	1581	1851
70°	1189	1629	1953
75°	1061	1699	2134
80°	904	1800	2180
85°	645	1783	2087



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	115.6	3.1
10°-20°	330.6	8.9
20°-30°	499.3	13.5
30°-40°	601.7	16.2
40°-50°	631.7	17.1
50°-60°	591.0	16.0
60°-70°	488.1	13.2
70°-80°	332.6	9.0
80°-90°	113.4	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°	945.4	25.5
0°-40°	1547.2	41.8
0°-60°	2769.9	74.8
0°-90°	3704.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3704.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1222	1222	1222	1222	1222	
5°	1219	1218	1212	1219	1219	116
15°	1165	1166	1168	1180	1182	328
25°	1063	1068	1080	1101	1107	489
35°	924	934	959	990	1000	578
45°	761	777	816	860	876	587
55°	584	607	661	715	736	521
65°	394	428	496	559	581	391
75°	204	251	327	388	410	218
85°	42	82	116	130	135	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1221.5	1221.5	1221.5	1221.5	1221.5
2.5°	1222.8	1221.5	1215.4	1221.5	1220.3
5°	1219.1	1217.9	1211.7	1219.1	1219.1
7.5°	1210.5	1210.5	1204.3	1212.9	1214.2
10°	1198.2	1198.2	1194.5	1204.3	1204.3
12.5°	1183.5	1183.5	1183.5	1193.3	1194.5
15°	1165.0	1166.2	1167.5	1179.8	1182.2
17.5°	1142.9	1145.4	1149.0	1163.8	1166.2
20°	1119.5	1122.0	1128.1	1145.4	1149.0
22.5°	1090.1	1096.2	1104.8	1124.5	1128.1
25°	1063.0	1067.9	1080.2	1101.1	1107.3
27.5°	1029.8	1037.2	1053.2	1075.3	1083.9
30°	996.7	1004.0	1023.7	1049.5	1056.9
32.5°	961.0	972.1	993.0	1020.0	1028.6
35°	924.1	934.0	958.6	990.5	1000.3
37.5°	883.6	897.1	924.1	958.6	970.8
40°	844.3	859.0	889.7	926.6	941.4
42.5°	804.9	819.7	854.1	895.9	910.6
45°	760.7	776.7	816.0	860.2	876.2
47.5°	716.5	736.1	779.1	825.8	843.0
50°	671.0	693.1	739.8	789.0	808.6
52.5°	630.4	651.3	700.5	753.3	771.8
55°	583.7	607.1	661.2	715.2	736.1
57.5°	535.8	561.6	619.4	678.4	699.3
60°	489.1	517.4	581.3	640.3	663.6
62.5°	443.6	471.9	538.3	599.7	623.1
65°	394.5	427.7	496.5	559.2	581.3
67.5°	347.8	383.4	455.9	517.4	539.5
70°	302.3	336.7	414.1	474.4	496.5
72.5°	253.2	292.5	369.9	432.6	455.9
75°	204.0	250.7	326.9	388.3	410.5
77.5°	158.5	206.5	282.7	333.0	344.1
80°	116.7	165.9	232.3	267.9	281.4
82.5°	75.0	124.1	177.0	202.8	213.8
85°	41.8	82.3	115.5	130.3	135.2
87.5°	17.2	35.6	46.7	52.8	52.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)