

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: P310511

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-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: P310511  
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: 24FCZ2-30HE-UNV-L82765-CP125-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED 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**

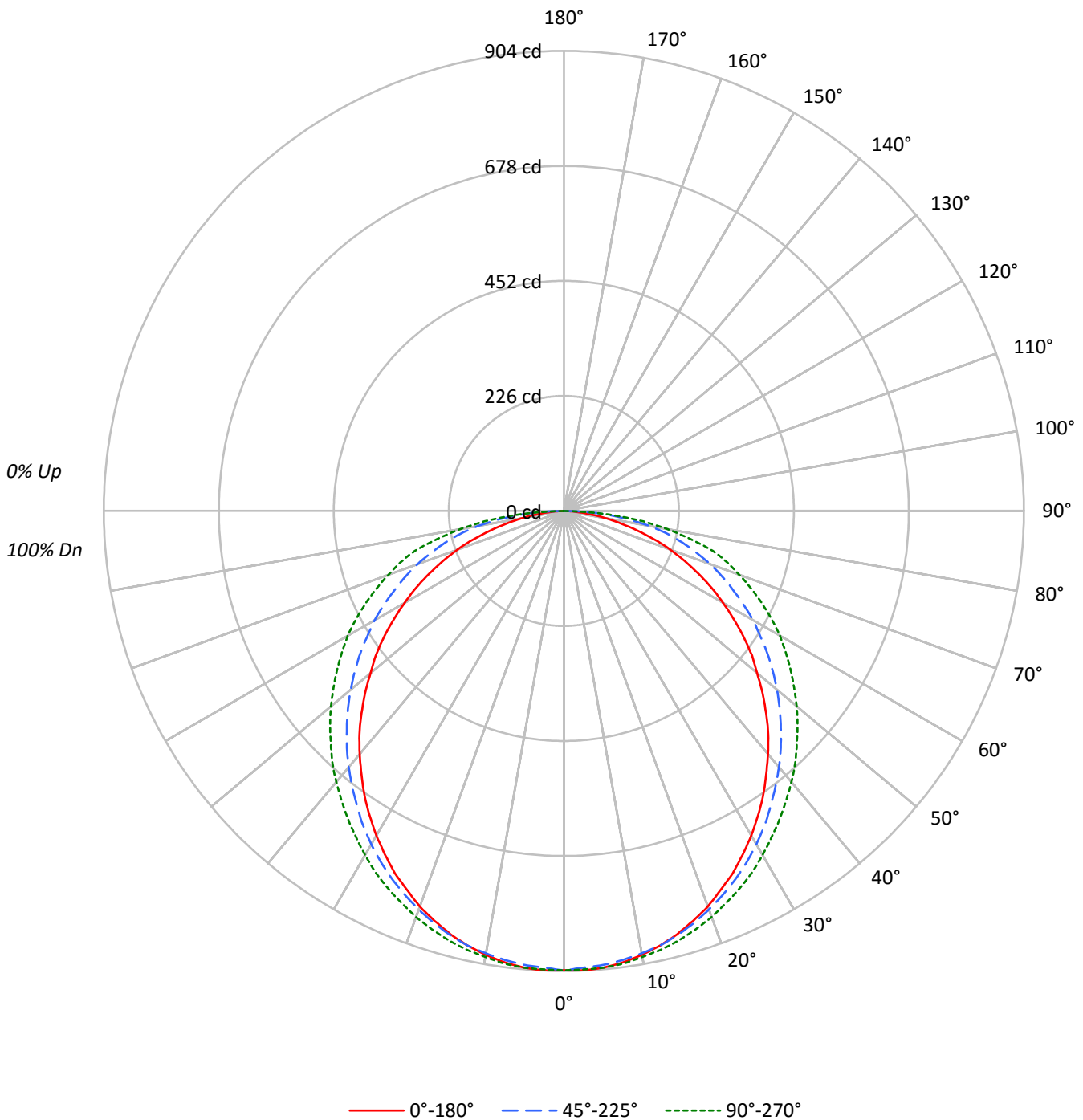
Lumens per Lamp: N/A  
Luminaire Lumens: 2737.0 lumens  
Efficiency: N/A  
Efficacy: 128.5 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.3  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1214	1214	1214
5°	1217	1209	1217
10°	1210	1206	1216
15°	1199	1202	1217
20°	1185	1194	1216
25°	1166	1185	1215
30°	1144	1175	1213
35°	1122	1163	1214
40°	1096	1155	1222
45°	1070	1147	1232
50°	1038	1144	1251
55°	1012	1146	1276
60°	973	1156	1320
65°	928	1168	1367
70°	879	1204	1443
75°	783	1256	1577
80°	669	1330	1612
85°	477	1318	1542



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.4	3.1
10°-20°	244.3	8.9
20°-30°	368.9	13.5
30°-40°	444.6	16.2
40°-50°	466.8	17.1
50°-60°	436.7	16.0
60°-70°	360.6	13.2
70°-80°	245.8	9.0
80°-90°	83.8	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°	698.6	25.5
0°-40°	1143.3	41.8
0°-60°	2046.8	74.8
0°-90°	2737.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2737.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	903	903	903	903	903	
5°	901	900	895	901	901	85
15°	861	862	863	872	874	243
25°	786	789	798	814	818	361
35°	683	690	708	732	739	427
45°	562	574	603	636	648	434
55°	431	449	489	528	544	385
65°	292	316	367	413	430	289
75°	151	185	242	287	303	161
85°	31	61	85	96	100	39
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	902.6	902.6	902.6	902.6	902.6
2.5°	903.5	902.6	898.1	902.6	901.7
5°	900.8	899.9	895.4	900.8	900.8
7.5°	894.5	894.5	889.9	896.3	897.2
10°	885.4	885.4	882.7	889.9	889.9
12.5°	874.5	874.5	874.5	881.8	882.7
15°	860.9	861.8	862.7	871.8	873.6
17.5°	844.5	846.3	849.1	860.0	861.8
20°	827.3	829.1	833.6	846.3	849.1
22.5°	805.5	810.0	816.4	830.9	833.6
25°	785.5	789.1	798.2	813.6	818.2
27.5°	761.0	766.4	778.2	794.6	800.9
30°	736.5	741.9	756.4	775.5	781.0
32.5°	710.1	718.3	733.7	753.7	760.1
35°	682.9	690.1	708.3	731.9	739.2
37.5°	652.9	662.9	682.9	708.3	717.4
40°	623.9	634.8	657.5	684.7	695.6
42.5°	594.8	605.7	631.1	662.0	672.9
45°	562.1	573.9	603.0	635.7	647.5
47.5°	529.4	543.9	575.7	610.2	622.9
50°	495.8	512.2	546.7	583.0	597.5
52.5°	465.8	481.3	517.6	556.7	570.3
55°	431.3	448.6	488.6	528.5	543.9
57.5°	395.9	415.0	457.7	501.3	516.7
60°	361.4	382.3	429.5	473.1	490.4
62.5°	327.8	348.7	397.7	443.1	460.4
65°	291.5	316.0	366.9	413.2	429.5
67.5°	257.0	283.3	336.9	382.3	398.7
70°	223.4	248.8	306.0	350.5	366.9
72.5°	187.1	216.1	273.3	319.6	336.9
75°	150.7	185.2	241.6	287.0	303.3
77.5°	117.1	152.6	208.9	246.1	254.3
80°	86.3	122.6	171.6	198.0	208.0
82.5°	55.4	91.7	130.8	149.8	158.0
85°	30.9	60.8	85.4	96.3	99.9
87.5°	12.7	26.3	34.5	39.0	39.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)