

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: P313792

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-CA08-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: P313792  
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-L83050-CA08-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" 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: 2947.0 lumens  
Efficiency: N/A  
Efficacy: 136.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

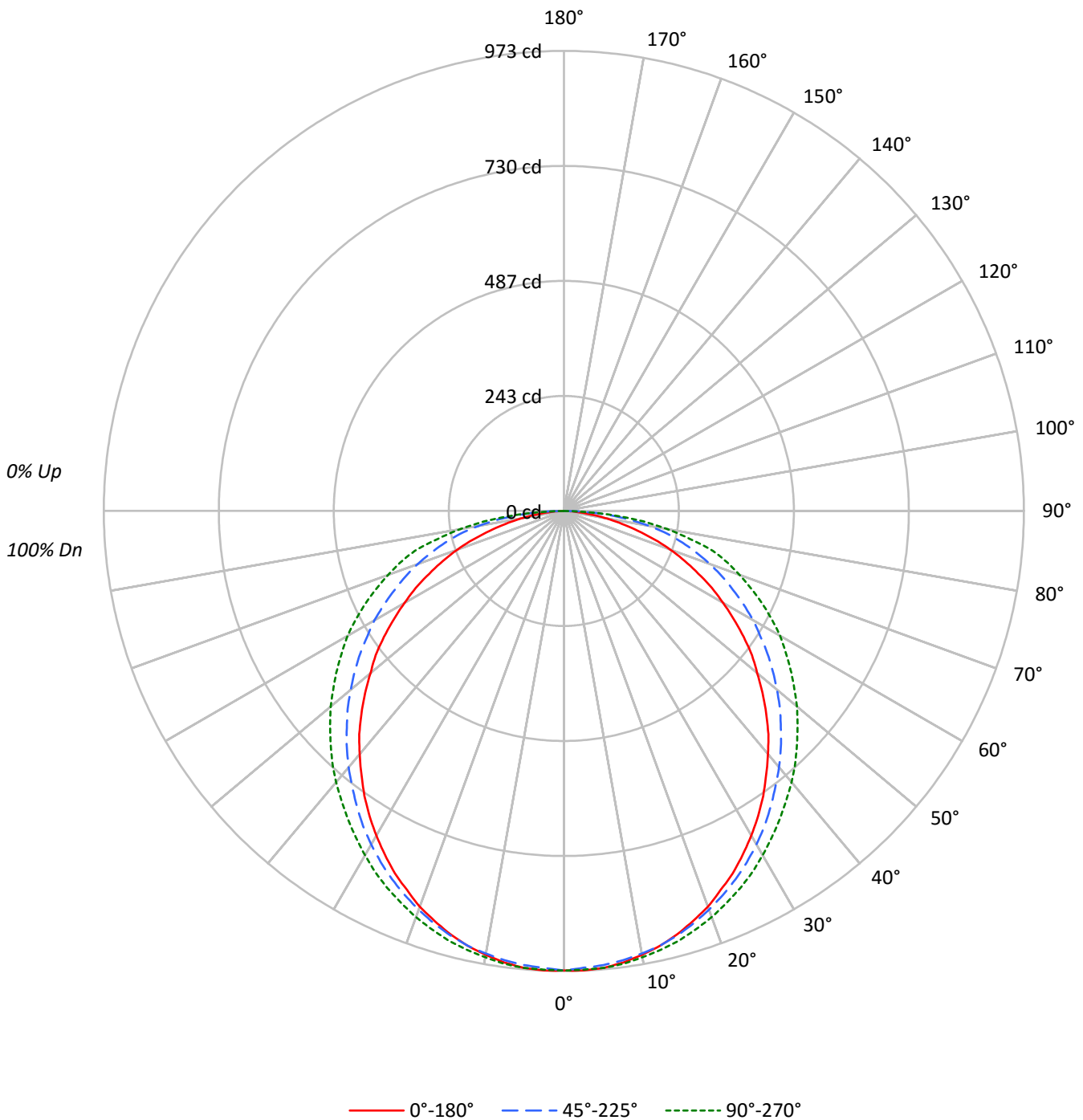
Input Watts (W): 21.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1308	1308	1308
5°	1310	1302	1310
10°	1302	1298	1309
15°	1291	1294	1310
20°	1275	1285	1309
25°	1256	1276	1308
30°	1232	1265	1306
35°	1208	1253	1307
40°	1180	1243	1316
45°	1152	1235	1326
50°	1118	1232	1347
55°	1089	1234	1374
60°	1047	1245	1421
65°	999	1258	1472
70°	946	1296	1554
75°	844	1352	1698
80°	720	1432	1735
85°	513	1419	1661



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.0	3.1
10°-20°	263.0	8.9
20°-30°	397.2	13.5
30°-40°	478.8	16.2
40°-50°	502.6	17.1
50°-60°	470.2	16.0
60°-70°	388.3	13.2
70°-80°	264.6	9.0
80°-90°	90.2	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°	752.2	25.5
0°-40°	1231.0	41.8
0°-60°	2203.8	74.8
0°-90°	2947.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2947.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	972	972	972	972	972	
5°	970	969	964	970	970	92
15°	927	928	929	939	941	261
25°	846	850	860	876	881	389
35°	735	743	763	788	796	459
45°	605	618	649	684	697	467
55°	464	483	526	569	586	415
65°	314	340	395	445	462	311
75°	162	200	260	309	327	173
85°	33	66	92	104	108	42
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	971.9	971.9	971.9	971.9	971.9
2.5°	972.9	971.9	967.0	971.9	970.9
5°	969.9	969.0	964.1	969.9	969.9
7.5°	963.1	963.1	958.2	965.1	966.0
10°	953.3	953.3	950.4	958.2	958.2
12.5°	941.6	941.6	941.6	949.4	950.4
15°	926.9	927.9	928.9	938.7	940.6
17.5°	909.3	911.3	914.2	925.9	927.9
20°	890.7	892.7	897.6	911.3	914.2
22.5°	867.3	872.2	879.0	894.7	897.6
25°	845.8	849.7	859.5	876.1	881.0
27.5°	819.4	825.2	837.9	855.5	862.4
30°	793.0	798.8	814.5	835.0	840.9
32.5°	764.6	773.4	790.0	811.5	818.4
35°	735.3	743.1	762.7	788.1	795.9
37.5°	703.0	713.8	735.3	762.7	772.4
40°	671.7	683.5	707.9	737.2	749.0
42.5°	640.4	652.2	679.5	712.8	724.5
45°	605.2	617.9	649.2	684.4	697.1
47.5°	570.0	585.7	619.9	657.1	670.7
50°	533.9	551.5	588.6	627.7	643.4
52.5°	501.6	518.2	557.3	599.4	614.0
55°	464.4	483.0	526.0	569.1	585.7
57.5°	426.3	446.8	492.8	539.7	556.3
60°	389.1	411.6	462.5	509.4	528.0
62.5°	353.0	375.5	428.3	477.1	495.7
65°	313.9	340.3	395.0	444.9	462.5
67.5°	276.7	305.1	362.7	411.6	429.2
70°	240.5	267.9	329.5	377.4	395.0
72.5°	201.4	232.7	294.3	344.2	362.7
75°	162.3	199.5	260.1	309.0	326.6
77.5°	126.1	164.3	224.9	265.0	273.8
80°	92.9	132.0	184.8	213.2	223.9
82.5°	59.6	98.8	140.8	161.3	170.1
85°	33.2	65.5	91.9	103.6	107.6
87.5°	13.7	28.4	37.2	42.0	42.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)