

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: P314165

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-S-CA08-W2A-U-3000K**

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: P314165  
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: 24FCZ2-30HE-UNV-L83050-S-CA08-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 3000K 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**

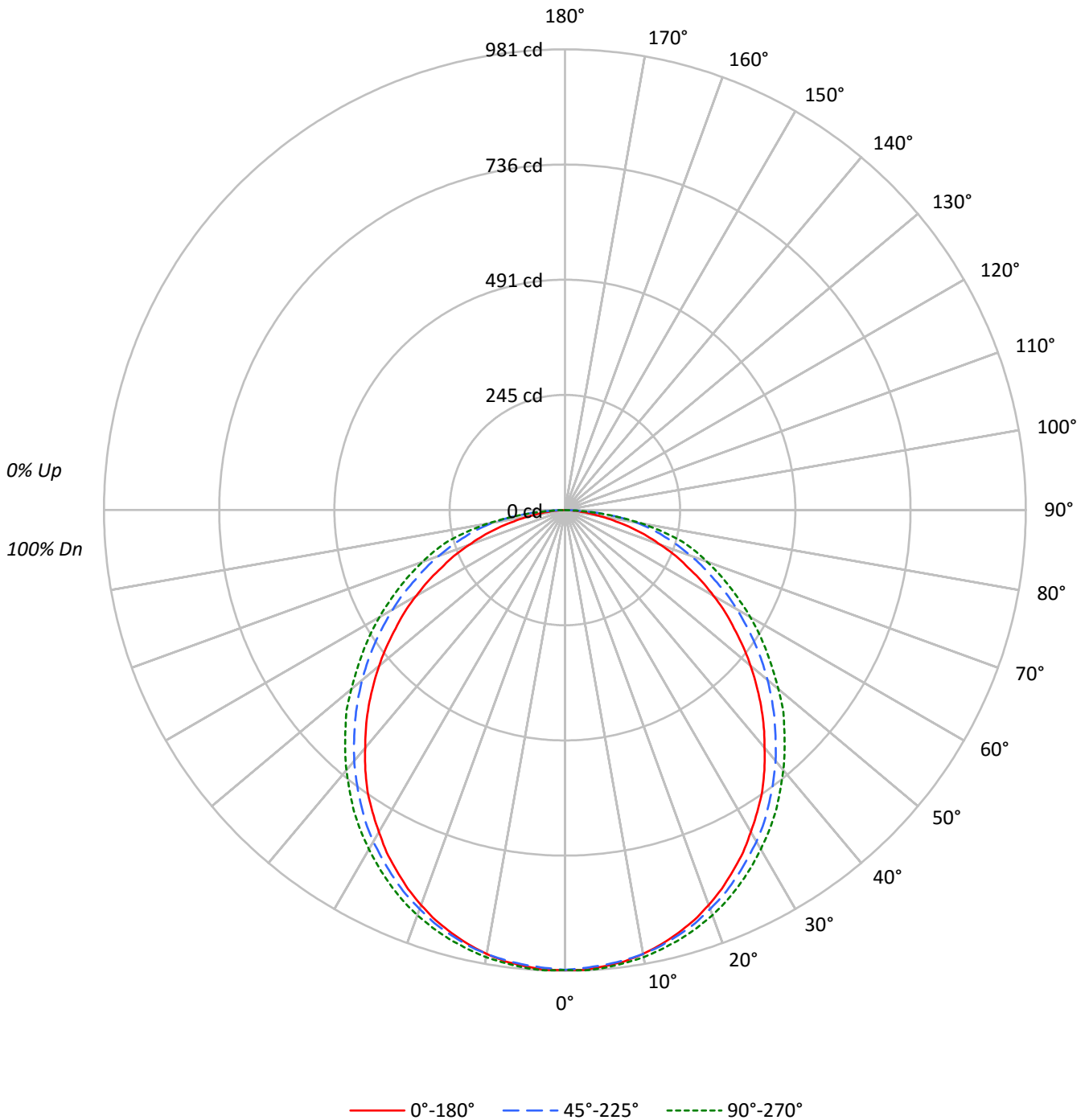
Lumens per Lamp: N/A  
Luminaire Lumens: 2787.0 lumens  
Efficiency: N/A  
Efficacy: 132.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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



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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°	1317	1317	1317
5°	1316	1313	1321
10°	1311	1311	1321
15°	1299	1305	1318
20°	1281	1294	1314
25°	1258	1281	1306
30°	1230	1267	1296
35°	1203	1246	1285
40°	1162	1225	1270
45°	1124	1201	1257
50°	1080	1178	1241
55°	1032	1157	1229
60°	984	1139	1227
65°	922	1119	1234
70°	853	1125	1268
75°	764	1146	1339
80°	618	1214	1310
85°	465	1065	1039



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.7	3.3
10°-20°	264.9	9.5
20°-30°	398.1	14.3
30°-40°	474.3	17.0
40°-50°	485.4	17.4
50°-60°	437.0	15.7
60°-70°	343.2	12.3
70°-80°	222.7	8.0
80°-90°	68.9	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°	755.7	27.1
0°-40°	1229.9	44.1
0°-60°	2152.3	77.2
0°-90°	2787.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2787.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	979	979	979	979	979	
5°	975	976	972	977	978	93
15°	932	935	937	945	946	263
25°	847	854	863	877	880	390
35°	732	741	759	777	783	457
45°	590	605	631	655	660	455
55°	440	459	493	519	524	394
65°	290	312	351	381	388	288
75°	147	175	220	250	258	156
85°	30	56	69	67	67	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	979.1	979.1	979.1	979.1	979.1
2.5°	980.0	980.0	975.6	980.0	980.9
5°	974.7	976.4	972.0	977.3	978.2
7.5°	969.4	969.4	966.7	972.0	972.9
10°	959.6	960.5	959.6	965.8	966.7
12.5°	947.2	949.0	949.9	956.1	957.0
15°	932.2	934.8	936.6	944.6	946.3
17.5°	915.4	918.0	922.4	931.3	933.1
20°	895.0	898.5	903.8	915.4	918.0
22.5°	872.9	876.4	885.3	895.9	900.3
25°	847.2	854.3	863.1	877.3	879.9
27.5°	821.5	827.7	839.2	854.3	857.8
30°	791.4	801.2	815.3	830.4	833.9
32.5°	762.2	771.9	788.8	804.7	809.1
35°	732.1	741.0	758.7	777.3	782.6
37.5°	697.6	709.1	728.6	747.2	752.5
40°	661.3	675.4	697.6	717.1	723.3
42.5°	626.8	641.8	663.9	685.2	692.3
45°	590.5	604.6	631.2	655.1	660.4
47.5°	553.3	569.2	597.5	621.4	630.3
50°	516.1	532.9	563.0	587.8	593.1
52.5°	478.9	496.6	528.5	555.1	557.7
55°	440.0	459.4	493.1	518.8	524.1
57.5°	404.6	421.4	457.7	484.2	490.4
60°	365.6	384.2	423.2	447.9	455.9
62.5°	328.4	347.9	388.6	413.4	420.5
65°	289.5	311.6	351.4	380.7	387.7
67.5°	255.8	277.1	319.6	347.9	355.0
70°	216.9	240.8	285.9	315.2	322.2
72.5°	183.2	208.0	253.2	281.5	292.1
75°	147.0	175.3	220.4	250.5	257.6
77.5°	111.5	144.3	190.3	213.3	213.3
80°	79.7	114.2	156.7	167.3	169.1
82.5°	52.2	85.9	116.0	115.1	115.1
85°	30.1	55.8	69.0	67.3	67.3
87.5°	11.5	23.0	24.8	24.8	23.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)