

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: P310497

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-CA08-W2A-U-5700K**

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: P310497
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-CA08-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 5700K 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: 2927.0 lumens
Efficiency: N/A
Efficacy: 134.9 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

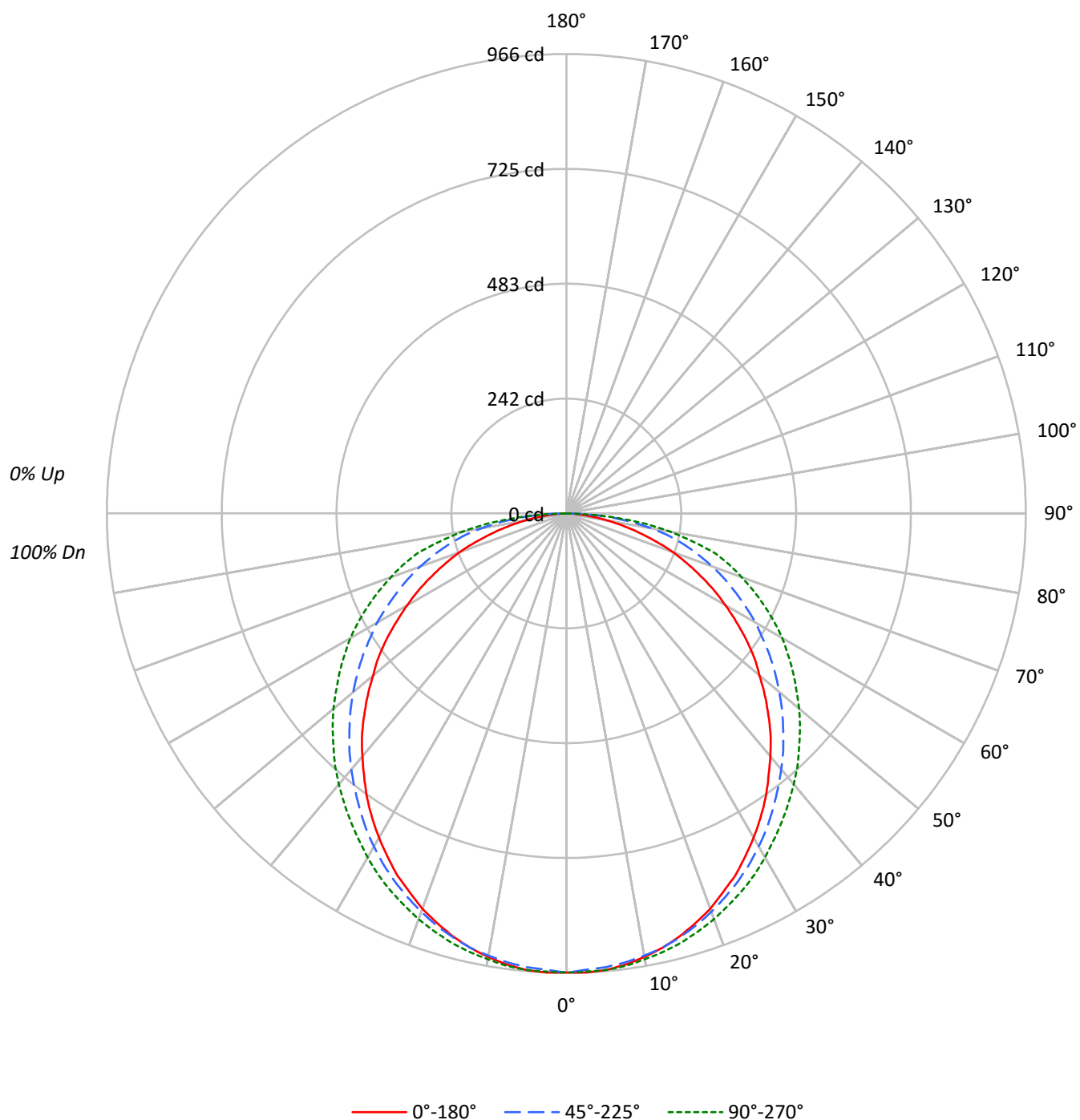
Input Watts (W): 21.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1299	1299	1299
5°	1301	1293	1301
10°	1294	1290	1300
15°	1282	1285	1301
20°	1267	1276	1300
25°	1247	1267	1299
30°	1224	1257	1298
35°	1200	1244	1298
40°	1172	1235	1307
45°	1144	1227	1318
50°	1110	1224	1338
55°	1082	1226	1365
60°	1040	1236	1411
65°	992	1249	1462
70°	940	1288	1543
75°	838	1343	1686
80°	715	1422	1723
85°	509	1409	1649



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.4	3.1
10°-20°	261.2	8.9
20°-30°	394.5	13.5
30°-40°	475.5	16.2
40°-50°	499.2	17.1
50°-60°	467.0	16.0
60°-70°	385.7	13.2
70°-80°	262.8	9.0
80°-90°	89.6	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°	747.1	25.5
0°-40°	1222.6	41.8
0°-60°	2188.9	74.8
0°-90°	2927.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2927.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	965	965	965	965	965	
5°	963	962	958	963	963	91
15°	921	922	923	932	934	260
25°	840	844	854	870	875	387
35°	730	738	758	783	790	456
45°	601	614	645	680	692	464
55°	461	480	522	565	582	412
65°	312	338	392	442	459	309
75°	161	198	258	307	324	172
85°	33	65	91	103	107	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	965.3	965.3	965.3	965.3	965.3
2.5°	966.3	965.3	960.4	965.3	964.3
5°	963.4	962.4	957.5	963.4	963.4
7.5°	956.6	956.6	951.7	958.5	959.5
10°	946.8	946.8	943.9	951.7	951.7
12.5°	935.2	935.2	935.2	943.0	943.9
15°	920.6	921.6	922.6	932.3	934.2
17.5°	903.1	905.1	908.0	919.7	921.6
20°	884.7	886.6	891.5	905.1	908.0
22.5°	861.4	866.2	873.0	888.6	891.5
25°	840.0	843.9	853.6	870.1	875.0
27.5°	813.8	819.6	832.3	849.7	856.5
30°	787.6	793.4	808.9	829.3	835.2
32.5°	759.4	768.2	784.7	806.0	812.8
35°	730.3	738.1	757.5	782.7	790.5
37.5°	698.2	708.9	730.3	757.5	767.2
40°	667.2	678.8	703.1	732.2	743.9
42.5°	636.1	647.7	674.9	708.0	719.6
45°	601.1	613.8	644.8	679.8	692.4
47.5°	566.2	581.7	615.7	652.6	666.2
50°	530.2	547.7	584.6	623.5	639.0
52.5°	498.2	514.7	553.5	595.3	609.9
55°	461.3	479.7	522.5	565.2	581.7
57.5°	423.4	443.8	489.4	536.1	552.6
60°	386.5	408.8	459.3	506.0	524.4
62.5°	350.6	372.9	425.4	473.9	492.4
65°	311.7	338.0	392.3	441.9	459.3
67.5°	274.8	303.0	360.3	408.8	426.3
70°	238.9	266.1	327.3	374.9	392.3
72.5°	200.1	231.1	292.3	341.8	360.3
75°	161.2	198.1	258.3	306.9	324.4
77.5°	125.3	163.1	223.4	263.2	271.9
80°	92.3	131.1	183.5	211.7	222.4
82.5°	59.2	98.1	139.8	160.2	169.0
85°	33.0	65.1	91.3	102.9	106.8
87.5°	13.6	28.2	36.9	41.8	41.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)