

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: P310498

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-CA08-W2A-U-6500K**

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: P310498
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-6500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 6500K 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: 2934.0 lumens
Efficiency: N/A
Efficacy: 133.4 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

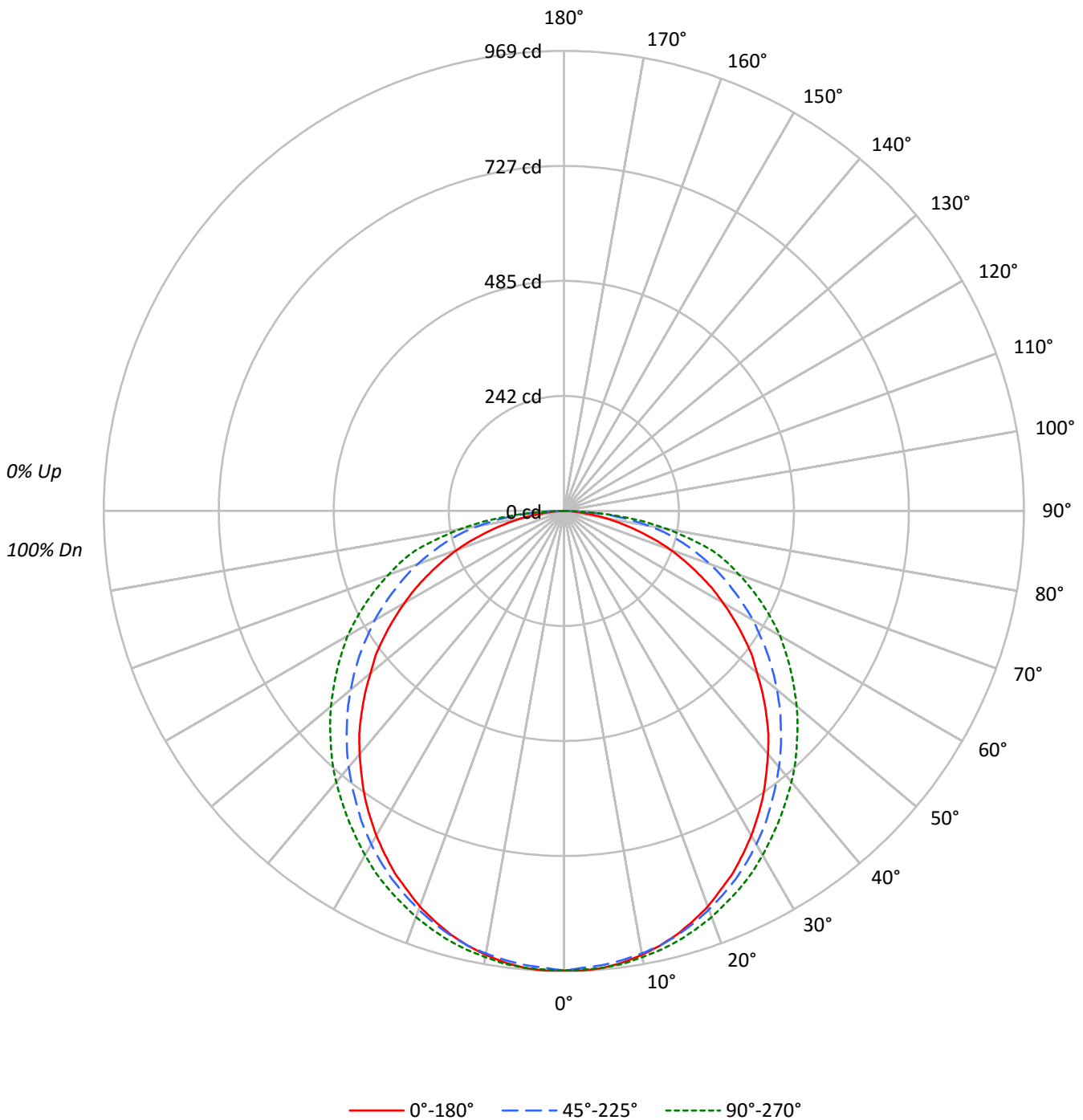
Input Watts (W): 22
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1302	1302	1302
5°	1304	1296	1304
10°	1297	1293	1303
15°	1285	1288	1305
20°	1270	1279	1303
25°	1250	1270	1302
30°	1227	1260	1301
35°	1202	1247	1302
40°	1175	1238	1310
45°	1147	1230	1321
50°	1113	1227	1341
55°	1085	1228	1368
60°	1042	1239	1415
65°	995	1252	1466
70°	942	1291	1547
75°	840	1346	1690
80°	717	1426	1727
85°	511	1413	1653



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.6	3.1
10°-20°	261.8	8.9
20°-30°	395.5	13.5
30°-40°	476.6	16.2
40°-50°	500.4	17.1
50°-60°	468.1	16.0
60°-70°	386.6	13.2
70°-80°	263.4	9.0
80°-90°	89.8	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°	748.9	25.5
0°-40°	1225.5	41.8
0°-60°	2194.1	74.8
0°-90°	2934.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2934.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	968	968	968	968	968	
5°	966	965	960	966	966	92
15°	923	924	925	934	936	260
25°	842	846	856	872	877	387
35°	732	740	759	785	792	457
45°	603	615	646	681	694	465
55°	462	481	524	566	583	413
65°	312	339	393	443	460	310
75°	162	199	259	308	325	172
85°	33	65	92	103	107	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	967.6	967.6	967.6	967.6	967.6
2.5°	968.6	967.6	962.7	967.6	966.6
5°	965.7	964.7	959.8	965.7	965.7
7.5°	958.8	958.8	954.0	960.8	961.8
10°	949.1	949.1	946.2	954.0	954.0
12.5°	937.4	937.4	937.4	945.2	946.2
15°	922.8	923.8	924.8	934.5	936.5
17.5°	905.3	907.3	910.2	921.9	923.8
20°	886.8	888.8	893.6	907.3	910.2
22.5°	863.4	868.3	875.1	890.7	893.6
25°	842.0	845.9	855.7	872.2	877.1
27.5°	815.7	821.6	834.2	851.8	858.6
30°	789.5	795.3	810.9	831.3	837.2
32.5°	761.2	770.0	786.5	808.0	814.8
35°	732.0	739.8	759.3	784.6	792.4
37.5°	699.9	710.6	732.0	759.3	769.0
40°	668.8	680.4	704.8	734.0	745.7
42.5°	637.6	649.3	676.5	709.6	721.3
45°	602.6	615.2	646.4	681.4	694.1
47.5°	567.5	583.1	617.2	654.2	667.8
50°	531.5	549.0	586.0	625.0	640.5
52.5°	499.4	515.9	554.9	596.7	611.3
55°	462.4	480.9	523.7	566.5	583.1
57.5°	424.4	444.9	490.6	537.3	553.9
60°	387.4	409.8	460.4	507.2	525.7
62.5°	351.4	373.8	426.4	475.0	493.5
65°	312.5	338.8	393.3	442.9	460.4
67.5°	275.5	303.7	361.1	409.8	427.3
70°	239.5	266.7	328.1	375.8	393.3
72.5°	200.5	231.7	293.0	342.7	361.1
75°	161.6	198.6	258.9	307.6	325.1
77.5°	125.6	163.5	223.9	263.8	272.6
80°	92.5	131.4	184.0	212.2	222.9
82.5°	59.4	98.3	140.2	160.6	169.4
85°	33.1	65.2	91.5	103.2	107.1
87.5°	13.6	28.2	37.0	41.9	41.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)