

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: P313790

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-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: P313790
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-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED 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: 2652.0 lumens
Efficiency: N/A
Efficacy: 125.7 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

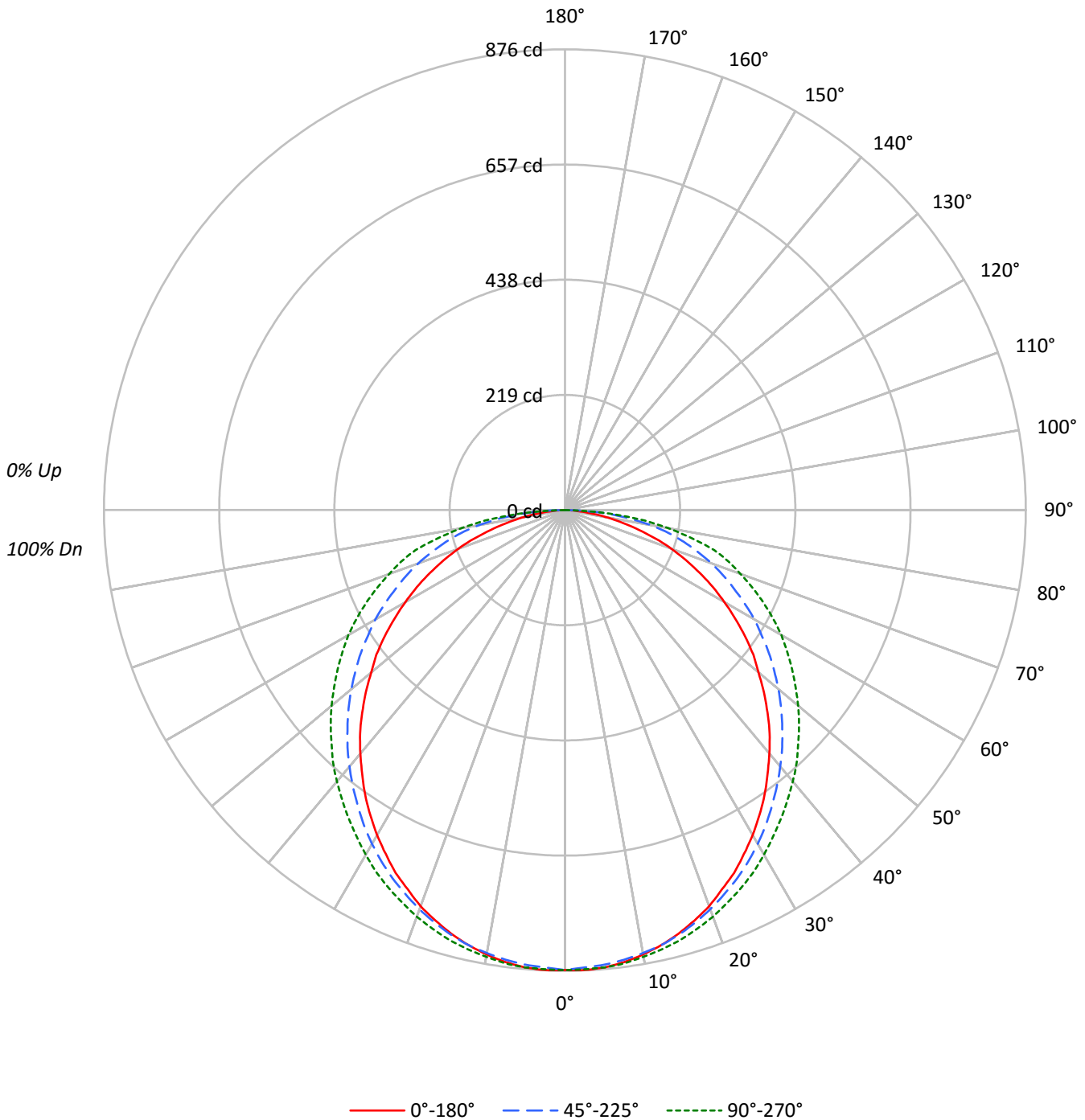
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1177	1177	1177
5°	1179	1172	1179
10°	1172	1168	1178
15°	1162	1164	1179
20°	1148	1156	1178
25°	1130	1148	1177
30°	1109	1139	1176
35°	1087	1127	1176
40°	1062	1119	1184
45°	1036	1112	1194
50°	1006	1109	1212
55°	980	1110	1236
60°	942	1120	1278
65°	899	1132	1325
70°	852	1166	1399
75°	760	1216	1528
80°	648	1289	1561
85°	462	1277	1494



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.8	3.1
10°-20°	236.7	8.9
20°-30°	357.5	13.5
30°-40°	430.8	16.2
40°-50°	452.3	17.1
50°-60°	423.2	16.0
60°-70°	349.4	13.2
70°-80°	238.1	9.0
80°-90°	81.2	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°	676.9	25.5
0°-40°	1107.8	41.8
0°-60°	1983.2	74.8
0°-90°	2652.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2652.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	875	875	875	875	875	
5°	873	872	868	873	873	83
15°	834	835	836	845	846	235
25°	761	765	773	788	793	350
35°	662	669	686	709	716	413
45°	545	556	584	616	627	420
55°	418	435	473	512	527	373
65°	282	306	356	400	416	280
75°	146	180	234	278	294	156
85°	30	59	83	93	97	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	874.6	874.6	874.6	874.6	874.6
2.5°	875.5	874.6	870.2	874.6	873.7
5°	872.8	872.0	867.6	872.8	872.8
7.5°	866.7	866.7	862.3	868.4	869.3
10°	857.9	857.9	855.2	862.3	862.3
12.5°	847.3	847.3	847.3	854.4	855.2
15°	834.1	835.0	835.9	844.7	846.5
17.5°	818.3	820.1	822.7	833.3	835.0
20°	801.6	803.3	807.7	820.1	822.7
22.5°	780.5	784.9	791.0	805.1	807.7
25°	761.1	764.6	773.4	788.4	792.8
27.5°	737.3	742.6	754.1	769.9	776.1
30°	713.6	718.9	732.9	751.4	756.7
32.5°	688.1	696.0	710.9	730.3	736.5
35°	661.7	668.7	686.3	709.2	716.2
37.5°	632.6	642.3	661.7	686.3	695.1
40°	604.5	615.0	637.0	663.4	674.0
42.5°	576.3	586.9	611.5	641.4	652.0
45°	544.6	556.1	584.2	615.9	627.4
47.5°	513.0	527.1	557.8	591.3	603.6
50°	480.4	496.3	529.7	564.9	579.0
52.5°	451.4	466.3	501.5	539.4	552.6
55°	417.9	434.7	473.4	512.1	527.1
57.5°	383.6	402.1	443.5	485.7	500.7
60°	350.2	370.4	416.2	458.4	475.1
62.5°	317.6	337.9	385.4	429.4	446.1
65°	282.4	306.2	355.5	400.3	416.2
67.5°	249.0	274.5	326.4	370.4	386.3
70°	216.5	241.1	296.5	339.6	355.5
72.5°	181.3	209.4	264.8	309.7	326.4
75°	146.1	179.5	234.0	278.0	293.9
77.5°	113.5	147.8	202.4	238.4	246.4
80°	83.6	118.8	166.3	191.8	201.5
82.5°	53.7	88.9	126.7	145.2	153.1
85°	29.9	59.0	82.7	93.3	96.8
87.5°	12.3	25.5	33.4	37.8	37.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)