

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: P310625

Luminaire Tested: **24FCZ2-35-UNV-L82765-CA08-W2A-U-2700K**

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: P310625
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: 24FCZ2-35-UNV-L82765-CA08-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 2700K 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: 2984.0 lumens
Efficiency: N/A
Efficacy: 106.6 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

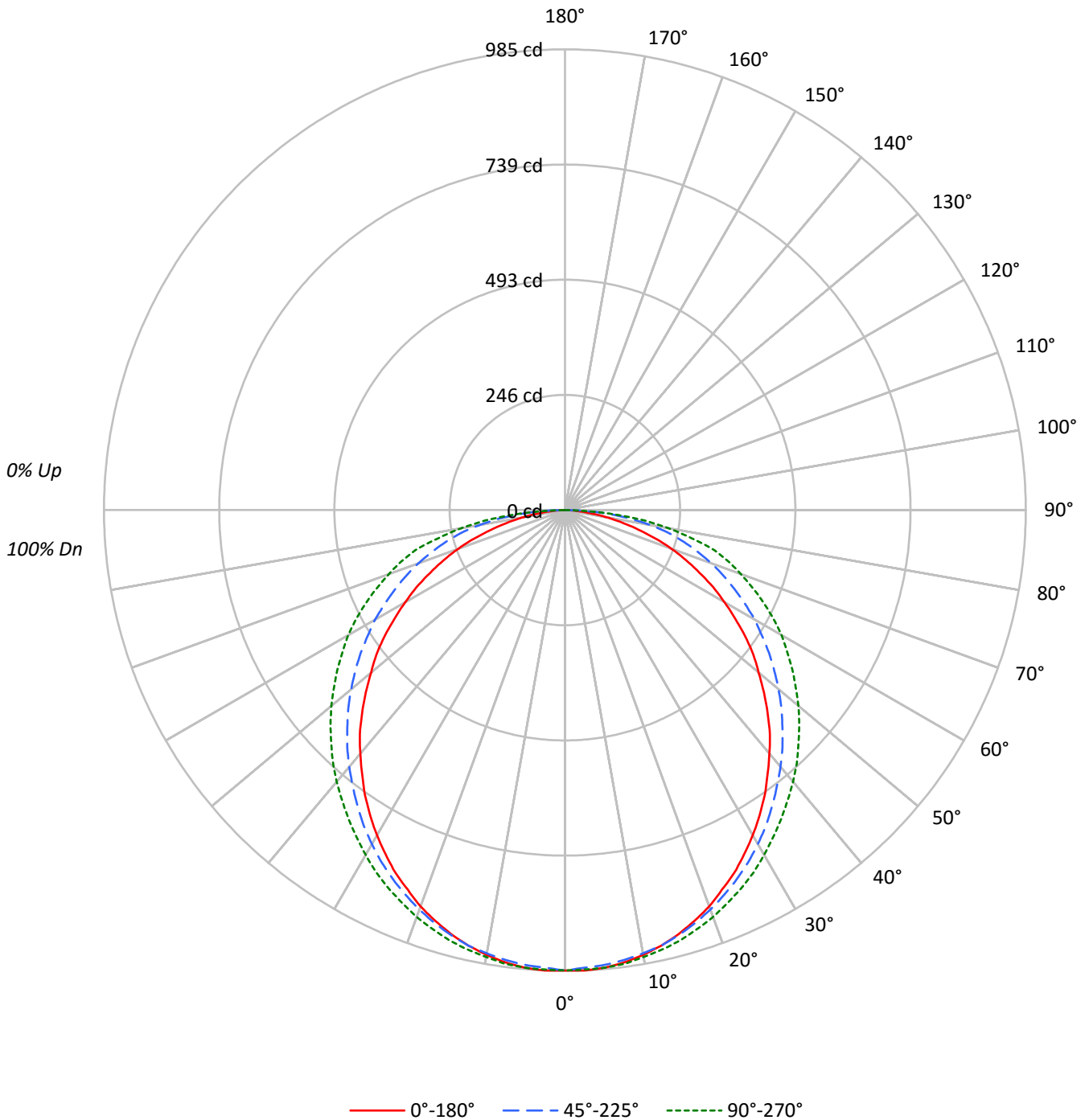
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	100	100	100	100	100		
	1	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82	82	82	82	82	82		
	2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67	67	67	67	67	67		
	3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56	56	56	56	56	56		
	4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47	47	47	47	47	47		
	5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41	41	41	41	41	41		
	6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36	36	36	36	36	36		
	7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31	31	31	31	31	31		
	8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28	28	28	28	28	28		
	9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25	25	25	25	25	25		
	10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23	23	23	23	23	23		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1324	1324	1324
5°	1326	1318	1326
10°	1319	1315	1326
15°	1307	1310	1327
20°	1291	1301	1325
25°	1271	1292	1324
30°	1247	1281	1323
35°	1223	1268	1324
40°	1195	1259	1332
45°	1166	1251	1343
50°	1132	1248	1364
55°	1103	1249	1391
60°	1060	1260	1439
65°	1012	1273	1491
70°	958	1312	1574
75°	854	1369	1719
80°	729	1450	1757
85°	520	1437	1681



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.1	3.1
10°-20°	266.3	8.9
20°-30°	402.2	13.5
30°-40°	484.8	16.2
40°-50°	508.9	17.1
50°-60°	476.1	16.0
60°-70°	393.2	13.2
70°-80°	267.9	9.0
80°-90°	91.4	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°	761.7	25.5
0°-40°	1246.4	41.8
0°-60°	2231.5	74.8
0°-90°	2984.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2984.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	984	984	984	984	984	
5°	982	981	976	982	982	93
15°	939	940	940	950	952	265
25°	856	860	870	887	892	394
35°	744	752	772	798	806	465
45°	613	626	657	693	706	473
55°	470	489	533	576	593	420
65°	318	344	400	450	468	315
75°	164	202	263	313	331	175
85°	34	66	93	105	109	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	984.1	984.1	984.1	984.1	984.1
2.5°	985.1	984.1	979.1	984.1	983.1
5°	982.1	981.1	976.2	982.1	982.1
7.5°	975.2	975.2	970.2	977.2	978.2
10°	965.3	965.3	962.3	970.2	970.2
12.5°	953.4	953.4	953.4	961.3	962.3
15°	938.6	939.5	940.5	950.4	952.4
17.5°	920.7	922.7	925.7	937.6	939.5
20°	901.9	903.9	908.9	922.7	925.7
22.5°	878.2	883.1	890.0	905.9	908.9
25°	856.4	860.3	870.2	887.1	892.0
27.5°	829.7	835.6	848.5	866.3	873.2
30°	802.9	808.9	824.7	845.5	851.4
32.5°	774.2	783.1	800.0	821.7	828.7
35°	744.5	752.4	772.2	798.0	805.9
37.5°	711.8	722.7	744.5	772.2	782.1
40°	680.2	692.0	716.8	746.5	758.4
42.5°	648.5	660.4	688.1	721.7	733.6
45°	612.8	625.7	657.4	693.0	705.9
47.5°	577.2	593.0	627.7	665.3	679.2
50°	540.6	558.4	596.0	635.6	651.4
52.5°	507.9	524.7	564.3	606.9	621.7
55°	470.3	489.1	532.6	576.2	593.0
57.5°	431.7	452.4	499.0	546.5	563.3
60°	394.0	416.8	468.3	515.8	534.6
62.5°	357.4	380.2	433.6	483.1	501.9
65°	317.8	344.5	400.0	450.5	468.3
67.5°	280.2	308.9	367.3	416.8	434.6
70°	243.5	271.3	333.6	382.2	400.0
72.5°	203.9	235.6	298.0	348.5	367.3
75°	164.3	202.0	263.3	312.9	330.7
77.5°	127.7	166.3	227.7	268.3	277.2
80°	94.1	133.7	187.1	215.8	226.7
82.5°	60.4	100.0	142.6	163.4	172.3
85°	33.7	66.3	93.1	104.9	108.9
87.5°	13.9	28.7	37.6	42.6	42.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)