

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: P310628

Luminaire Tested: **24FCZ2-35-UNV-L82765-CA08-W2A-U-4000K**

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: P310628
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-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 4000K 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: 3247.0 lumens
Efficiency: N/A
Efficacy: 114.7 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

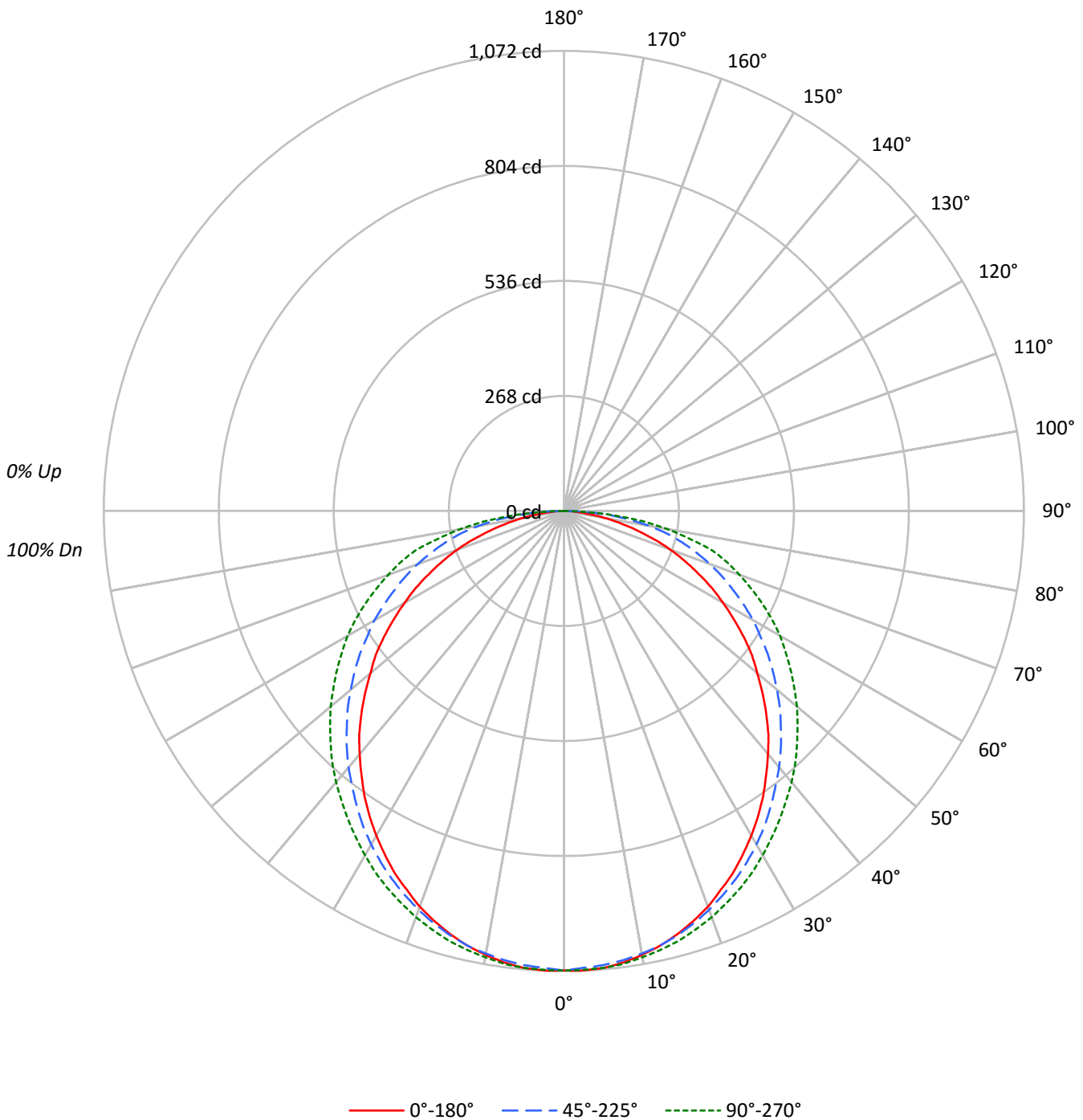
Input Watts (W): 28.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1441	1441	1441
5°	1443	1435	1443
10°	1435	1431	1442
15°	1423	1426	1444
20°	1405	1416	1442
25°	1383	1406	1441
30°	1357	1394	1439
35°	1331	1380	1440
40°	1300	1370	1449
45°	1269	1361	1462
50°	1231	1357	1484
55°	1200	1360	1514
60°	1154	1371	1565
65°	1101	1386	1622
70°	1042	1428	1712
75°	930	1490	1870
80°	793	1578	1912
85°	565	1564	1829



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.3	3.1
10°-20°	289.8	8.9
20°-30°	437.7	13.5
30°-40°	527.5	16.2
40°-50°	553.8	17.1
50°-60°	518.1	16.0
60°-70°	427.9	13.2
70°-80°	291.5	9.0
80°-90°	99.4	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°	828.8	25.5
0°-40°	1356.3	41.8
0°-60°	2428.2	74.8
0°-90°	3247.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3247.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1071	1071	1071	1071	1071	
5°	1069	1068	1062	1069	1069	101
15°	1021	1022	1023	1034	1036	288
25°	932	936	947	965	971	429
35°	810	819	840	868	877	506
45°	667	681	715	754	768	514
55°	512	532	580	627	645	457
65°	346	375	435	490	510	343
75°	179	220	287	340	360	191
85°	37	72	101	114	118	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1070.8	1070.8	1070.8	1070.8	1070.8
2.5°	1071.9	1070.8	1065.4	1070.8	1069.8
5°	1068.7	1067.6	1062.2	1068.7	1068.7
7.5°	1061.1	1061.1	1055.8	1063.3	1064.4
10°	1050.4	1050.4	1047.1	1055.8	1055.8
12.5°	1037.4	1037.4	1037.4	1046.1	1047.1
15°	1021.3	1022.4	1023.4	1034.2	1036.4
17.5°	1001.9	1004.0	1007.3	1020.2	1022.4
20°	981.4	983.6	989.0	1004.0	1007.3
22.5°	955.6	960.9	968.5	985.7	989.0
25°	931.9	936.2	946.9	965.3	970.6
27.5°	902.8	909.2	923.2	942.6	950.2
30°	873.7	880.2	897.4	920.0	926.5
32.5°	842.4	852.1	870.5	894.2	901.7
35°	810.1	818.7	840.3	868.3	876.9
37.5°	774.6	786.4	810.1	840.3	851.1
40°	740.1	753.0	780.0	812.3	825.2
42.5°	705.6	718.6	748.7	785.3	798.3
45°	666.8	680.9	715.3	754.1	768.1
47.5°	628.1	645.3	683.0	723.9	739.0
50°	588.2	607.6	648.5	691.6	708.9
52.5°	552.7	571.0	614.1	660.4	676.5
55°	511.7	532.2	579.6	627.0	645.3
57.5°	469.7	492.3	543.0	594.7	613.0
60°	428.8	453.5	509.6	561.3	581.7
62.5°	388.9	413.7	471.9	525.7	546.2
65°	345.8	374.9	435.2	490.2	509.6
67.5°	304.9	336.1	399.7	453.5	472.9
70°	265.0	295.2	363.0	415.8	435.2
72.5°	221.9	256.4	324.3	379.2	399.7
75°	178.8	219.8	286.6	340.4	359.8
77.5°	139.0	181.0	247.8	291.9	301.6
80°	102.3	145.4	203.6	234.9	246.7
82.5°	65.7	108.8	155.1	177.8	187.4
85°	36.6	72.2	101.3	114.2	118.5
87.5°	15.1	31.2	40.9	46.3	46.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)