

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: P313841

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-CA08-W2A-U-3500K**

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: P313841
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: 24FCZ2-35HE-UNV-L83050-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 3500K 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: 3217.0 lumens
Efficiency: N/A
Efficacy: 123.7 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

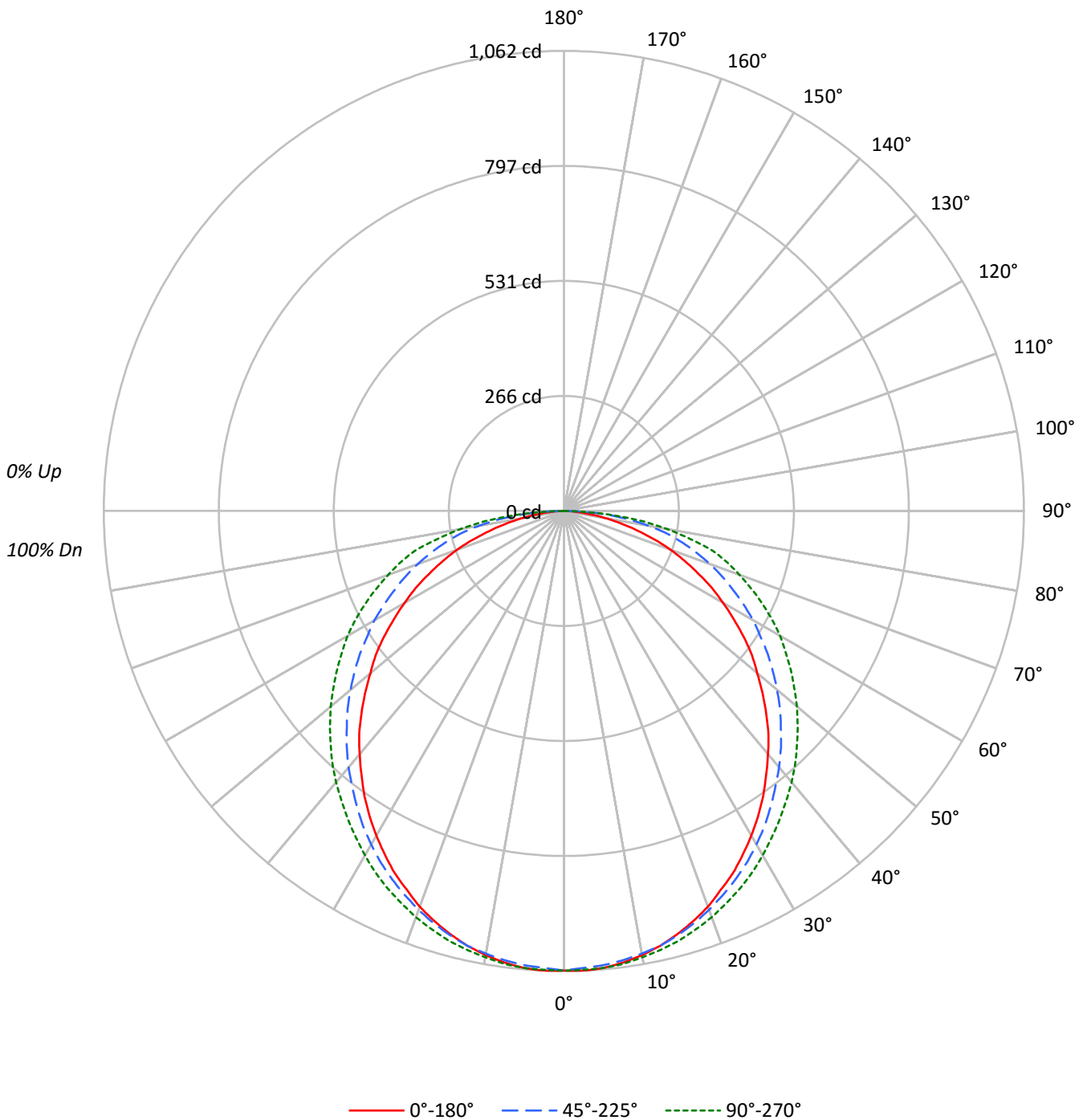
Input Watts (W): 26
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1427	1427	1427
5°	1430	1421	1430
10°	1422	1417	1429
15°	1409	1412	1430
20°	1392	1403	1429
25°	1371	1393	1428
30°	1345	1381	1426
35°	1318	1367	1427
40°	1288	1357	1436
45°	1257	1349	1448
50°	1220	1345	1470
55°	1189	1347	1500
60°	1143	1359	1551
65°	1091	1373	1607
70°	1033	1415	1696
75°	921	1476	1853
80°	786	1563	1894
85°	560	1548	1812



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.4	3.1
10°-20°	287.1	8.9
20°-30°	433.6	13.5
30°-40°	522.6	16.2
40°-50°	548.7	17.1
50°-60°	513.3	16.0
60°-70°	423.9	13.2
70°-80°	288.9	9.0
80°-90°	98.5	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°	821.1	25.5
0°-40°	1343.8	41.8
0°-60°	2405.7	74.8
0°-90°	3217.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3217.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1061	1061	1061	1061	1061	
5°	1059	1058	1052	1059	1059	100
15°	1012	1013	1014	1025	1027	285
25°	923	928	938	956	962	425
35°	803	811	832	860	869	502
45°	661	675	709	747	761	510
55°	507	527	574	621	639	453
65°	343	371	431	486	505	340
75°	177	218	284	337	356	189
85°	36	72	100	113	117	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1060.9	1060.9	1060.9	1060.9	1060.9
2.5°	1062.0	1060.9	1055.6	1060.9	1059.9
5°	1058.8	1057.7	1052.4	1058.8	1058.8
7.5°	1051.3	1051.3	1046.0	1053.5	1054.5
10°	1040.7	1040.7	1037.5	1046.0	1046.0
12.5°	1027.9	1027.9	1027.9	1036.4	1037.5
15°	1011.8	1012.9	1014.0	1024.6	1026.8
17.5°	992.6	994.8	998.0	1010.8	1012.9
20°	972.3	974.5	979.8	994.8	998.0
22.5°	946.7	952.1	959.5	976.6	979.8
25°	923.3	927.5	938.2	956.3	961.7
27.5°	894.4	900.8	914.7	933.9	941.4
30°	865.6	872.0	889.1	911.5	917.9
32.5°	834.7	844.3	862.4	885.9	893.4
35°	802.6	811.2	832.5	860.3	868.8
37.5°	767.4	779.2	802.6	832.5	843.2
40°	733.3	746.1	772.8	804.8	817.6
42.5°	699.1	711.9	741.8	778.1	790.9
45°	660.7	674.6	708.7	747.1	761.0
47.5°	622.3	639.3	676.7	717.3	732.2
50°	582.8	602.0	642.5	685.2	702.3
52.5°	547.5	565.7	608.4	654.3	670.3
55°	507.0	527.3	574.2	621.2	639.3
57.5°	465.4	487.8	537.9	589.2	607.3
60°	424.8	449.4	504.9	556.1	576.4
62.5°	385.3	409.9	467.5	520.9	541.1
65°	342.6	371.4	431.2	485.6	504.9
67.5°	302.1	333.0	396.0	449.4	468.6
70°	262.6	292.5	359.7	412.0	431.2
72.5°	219.9	254.0	321.3	375.7	396.0
75°	177.2	217.7	283.9	337.3	356.5
77.5°	137.7	179.3	245.5	289.2	298.9
80°	101.4	144.1	201.7	232.7	244.4
82.5°	65.1	107.8	153.7	176.1	185.7
85°	36.3	71.5	100.3	113.1	117.4
87.5°	14.9	31.0	40.6	45.9	45.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)