

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: P312868

Luminaire Tested: **22FCZ2-44HE-UNV-L83050-CA08-W2A-U-4500K**

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: P312868
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-44HE-UNV-L83050-CA08-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 4500K 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: 4218.0 lumens
Efficiency: N/A
Efficacy: 108.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

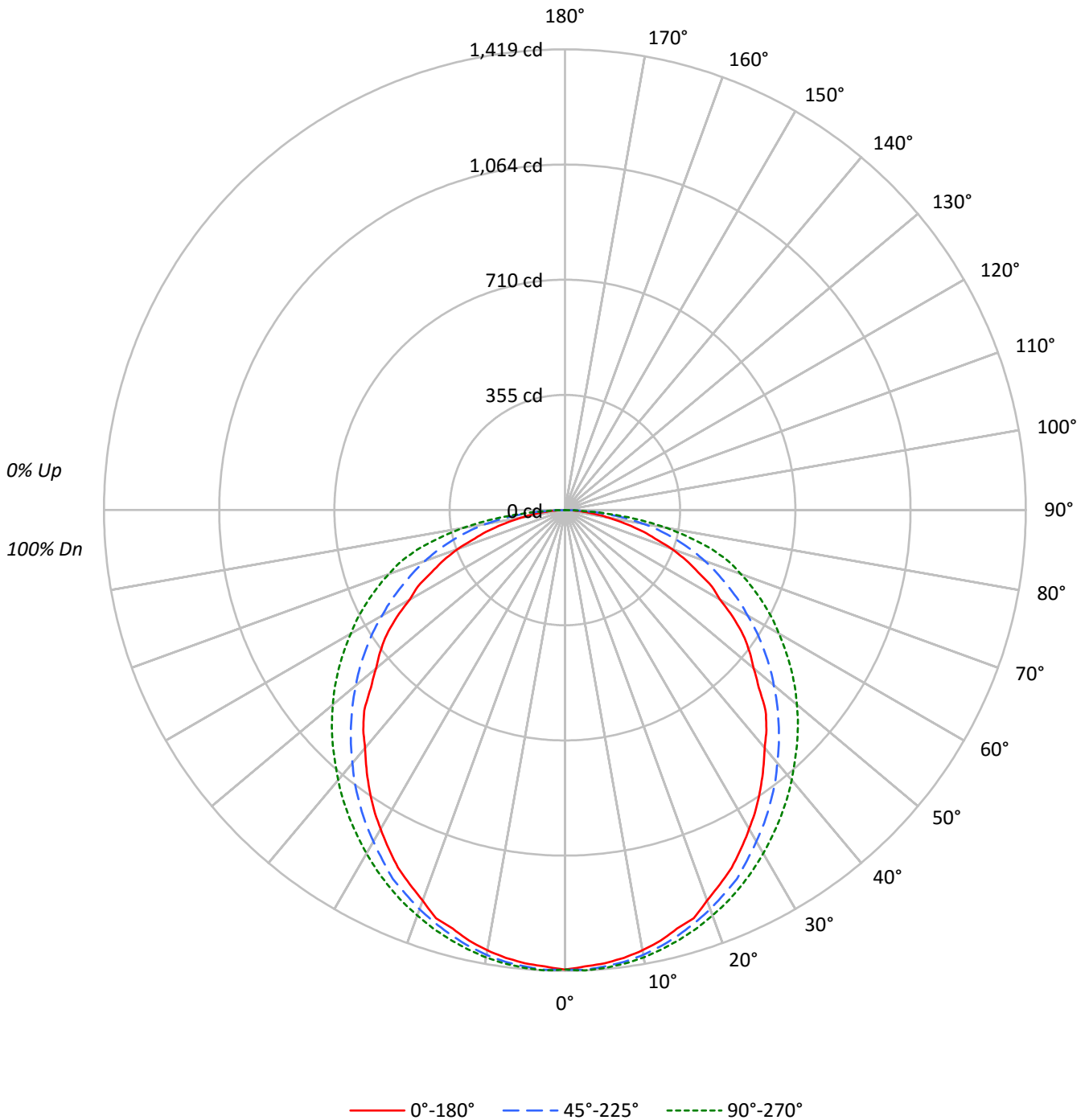
Input Watts (W): 39
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3808	3808	3808
5°	3784	3812	3823
10°	3762	3801	3823
15°	3718	3774	3813
20°	3665	3746	3804
25°	3608	3722	3800
30°	3526	3663	3795
35°	3449	3621	3800
40°	3361	3574	3815
45°	3326	3542	3849
50°	3178	3516	3905
55°	3144	3505	3987
60°	2966	3499	4096
65°	2879	3522	4281
70°	2764	3606	4543
75°	2519	3715	4891
80°	2159	3848	4943
85°	1744	3677	4239



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.9	3.2
10°-20°	382.0	9.1
20°-30°	574.9	13.6
30°-40°	690.0	16.4
40°-50°	721.2	17.1
50°-60°	672.1	15.9
60°-70°	551.3	13.1
70°-80°	371.5	8.8
80°-90°	121.0	2.9
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°	1090.9	25.9
0°-40°	1780.9	42.2
0°-60°	3174.3	75.3
0°-90°	4218.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4218.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1415	1415	1415	1415	1415	
5°	1401	1405	1411	1413	1415	133
15°	1334	1342	1355	1367	1369	377
25°	1215	1223	1254	1272	1280	559
35°	1050	1064	1102	1141	1157	656
45°	874	880	931	987	1011	668
55°	670	682	747	818	850	594
65°	452	472	553	634	672	450
75°	242	268	357	438	470	255
85°	56	81	119	139	137	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1415.2	1415.2	1415.2	1415.2	1415.2
2.5°	1407.1	1411.1	1417.2	1419.2	1419.2
5°	1401.0	1405.1	1411.1	1413.2	1415.2
7.5°	1390.9	1395.0	1403.1	1407.1	1409.1
10°	1376.8	1380.9	1390.9	1397.0	1399.0
12.5°	1358.6	1362.7	1374.8	1382.9	1384.9
15°	1334.4	1342.5	1354.6	1366.7	1368.7
17.5°	1318.3	1316.3	1332.4	1346.5	1350.6
20°	1279.9	1290.0	1308.2	1324.3	1328.4
22.5°	1247.6	1255.7	1279.9	1298.1	1306.2
25°	1215.3	1223.4	1253.7	1271.8	1279.9
27.5°	1174.9	1187.1	1215.3	1241.6	1251.7
30°	1134.6	1146.7	1179.0	1209.3	1221.4
32.5°	1094.2	1108.3	1142.6	1174.9	1189.1
35°	1049.8	1063.9	1102.3	1140.6	1156.8
37.5°	1003.3	1021.5	1061.9	1104.3	1122.4
40°	956.9	975.1	1017.5	1065.9	1086.1
42.5°	918.6	926.6	975.1	1027.6	1047.8
45°	874.1	880.2	930.7	987.2	1011.4
47.5°	809.5	831.7	886.3	948.8	973.1
50°	759.1	783.3	839.8	906.4	932.7
52.5°	716.7	732.8	795.4	862.0	892.3
55°	670.2	682.4	747.0	817.6	849.9
57.5°	613.7	635.9	700.5	773.2	805.5
60°	551.1	579.4	650.1	728.8	761.1
62.5°	510.8	526.9	603.6	682.4	718.7
65°	452.2	472.4	553.1	633.9	672.3
67.5°	403.8	423.9	506.7	587.5	625.8
70°	351.3	371.5	458.3	539.0	577.4
72.5°	290.7	319.0	409.8	490.6	530.9
75°	242.3	268.5	357.3	438.1	470.4
77.5°	187.7	222.1	304.8	371.5	395.7
80°	139.3	173.6	248.3	296.8	319.0
82.5°	94.9	129.2	185.7	222.1	234.2
85°	56.5	80.8	119.1	139.3	137.3
87.5°	26.2	34.3	48.5	48.5	46.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)