

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: P309053

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-S-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: P309053
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-39HE-UNV-L82765-S-CA08-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 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: 3734.0 lumens
Efficiency: N/A
Efficacy: 113.8 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

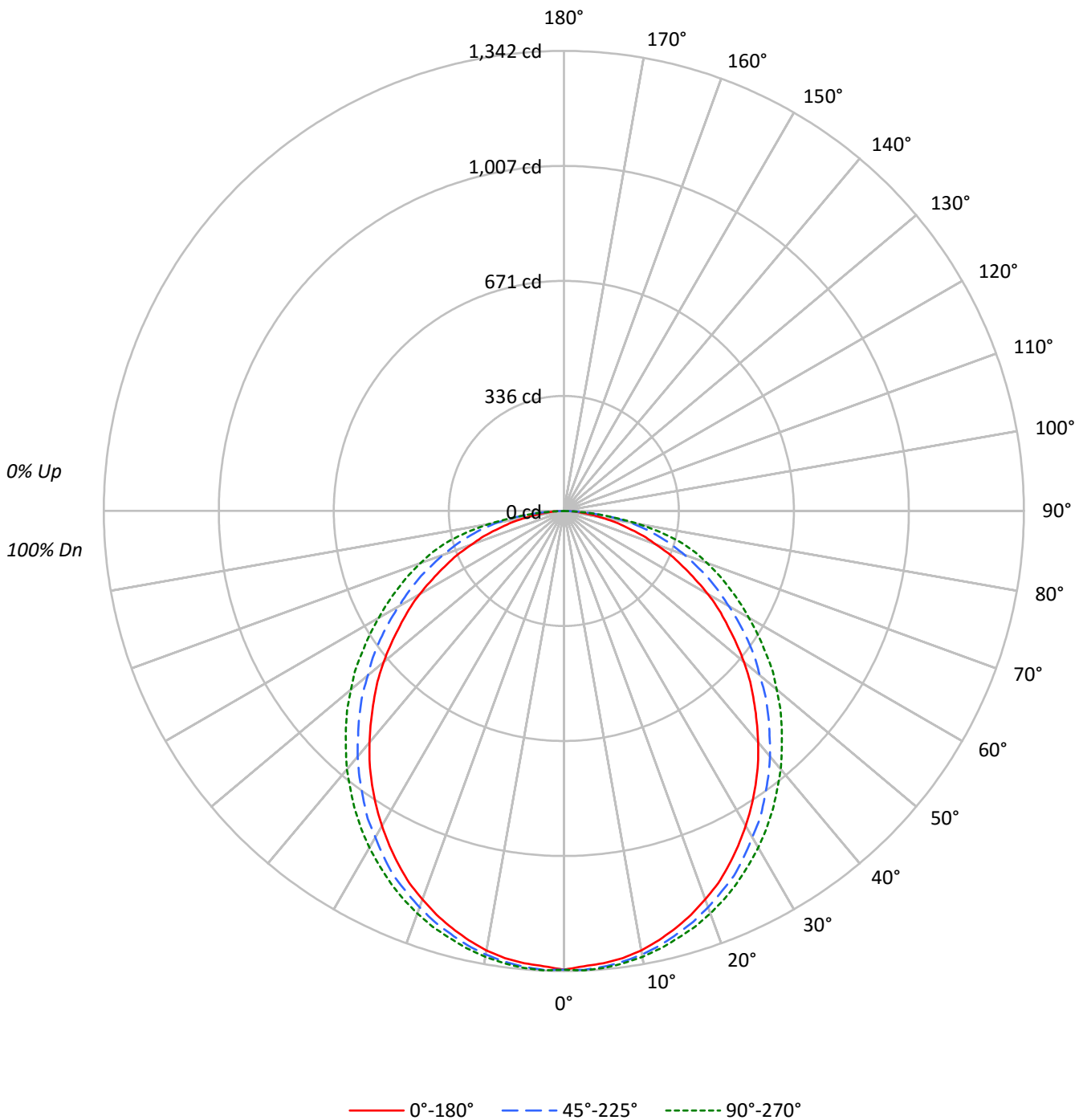
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3601	3601	3601
5°	3577	3605	3614
10°	3556	3589	3609
15°	3509	3558	3592
20°	3452	3522	3577
25°	3383	3486	3554
30°	3297	3416	3524
35°	3205	3354	3491
40°	3097	3287	3458
45°	2984	3209	3421
50°	2874	3122	3391
55°	2738	3065	3368
60°	2616	2991	3357
65°	2441	2973	3394
70°	2248	2947	3496
75°	2028	2989	3677
80°	1754	3078	3456
85°	1451	2581	2581



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.5	3.4
10°-20°	360.1	9.6
20°-30°	538.8	14.4
30°-40°	638.1	17.1
40°-50°	650.3	17.4
50°-60°	582.8	15.6
60°-70°	456.3	12.2
70°-80°	294.2	7.9
80°-90°	86.9	2.3
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°	1025.4	27.5
0°-40°	1663.5	44.5
0°-60°	2896.5	77.6
0°-90°	3734.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3734.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1338	1338	1338	1338	1338	
5°	1324	1328	1334	1336	1338	126
15°	1260	1267	1277	1288	1289	355
25°	1139	1150	1174	1190	1197	524
35°	976	988	1021	1052	1063	610
45°	784	801	843	887	899	605
55°	584	603	653	699	718	523
65°	383	406	467	512	533	381
75°	195	225	288	336	354	209
85°	47	64	84	84	84	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1338.0	1338.0	1338.0	1338.0	1338.0
2.5°	1329.3	1332.8	1339.8	1341.5	1341.5
5°	1324.1	1327.6	1334.5	1336.3	1338.0
7.5°	1315.4	1317.1	1325.8	1329.3	1331.0
10°	1301.4	1304.9	1313.6	1318.8	1320.6
12.5°	1282.3	1287.5	1297.9	1304.9	1306.6
15°	1259.6	1266.6	1277.0	1287.5	1289.2
17.5°	1235.2	1242.2	1256.1	1268.3	1271.8
20°	1205.6	1214.3	1230.0	1243.9	1249.2
22.5°	1176.0	1183.0	1202.1	1219.5	1224.8
25°	1139.4	1149.9	1174.2	1189.9	1196.9
27.5°	1101.1	1113.3	1137.7	1158.6	1165.5
30°	1061.0	1073.2	1099.3	1125.5	1134.2
32.5°	1019.2	1033.1	1064.5	1090.6	1099.3
35°	975.6	987.8	1020.9	1052.3	1062.7
37.5°	930.3	940.8	979.1	1012.2	1022.7
40°	881.6	895.5	935.6	973.9	984.3
42.5°	832.8	848.5	888.5	930.3	940.8
45°	784.0	801.4	843.2	886.8	899.0
47.5°	737.0	750.9	797.9	839.7	857.2
50°	686.4	700.4	745.7	792.7	810.1
52.5°	634.2	653.3	702.1	747.4	768.3
55°	583.6	602.8	653.3	698.6	717.8
57.5°	536.6	552.3	604.5	651.6	670.7
60°	486.1	500.0	555.8	606.3	623.7
62.5°	432.1	453.0	510.5	557.5	578.4
65°	383.3	405.9	466.9	512.2	533.1
67.5°	338.0	358.9	418.1	466.9	489.6
70°	285.7	313.6	374.6	423.4	444.3
72.5°	243.9	268.3	331.0	379.8	402.4
75°	195.1	224.7	287.5	336.2	353.7
77.5°	155.1	184.7	243.9	282.2	290.9
80°	113.2	142.9	198.6	217.8	223.0
82.5°	76.7	104.5	142.9	148.1	149.8
85°	47.0	64.5	83.6	83.6	83.6
87.5°	22.6	26.1	29.6	27.9	27.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)