

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: P309372

Luminaire Tested: **24FCZ2-40-UNV-L82765-HRP-CA08-W2A-U-5700K**

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: P309372
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-40-UNV-L82765-HRP-CA08-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 5700K 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: 2927.0 lumens
Efficiency: N/A
Efficacy: 87.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

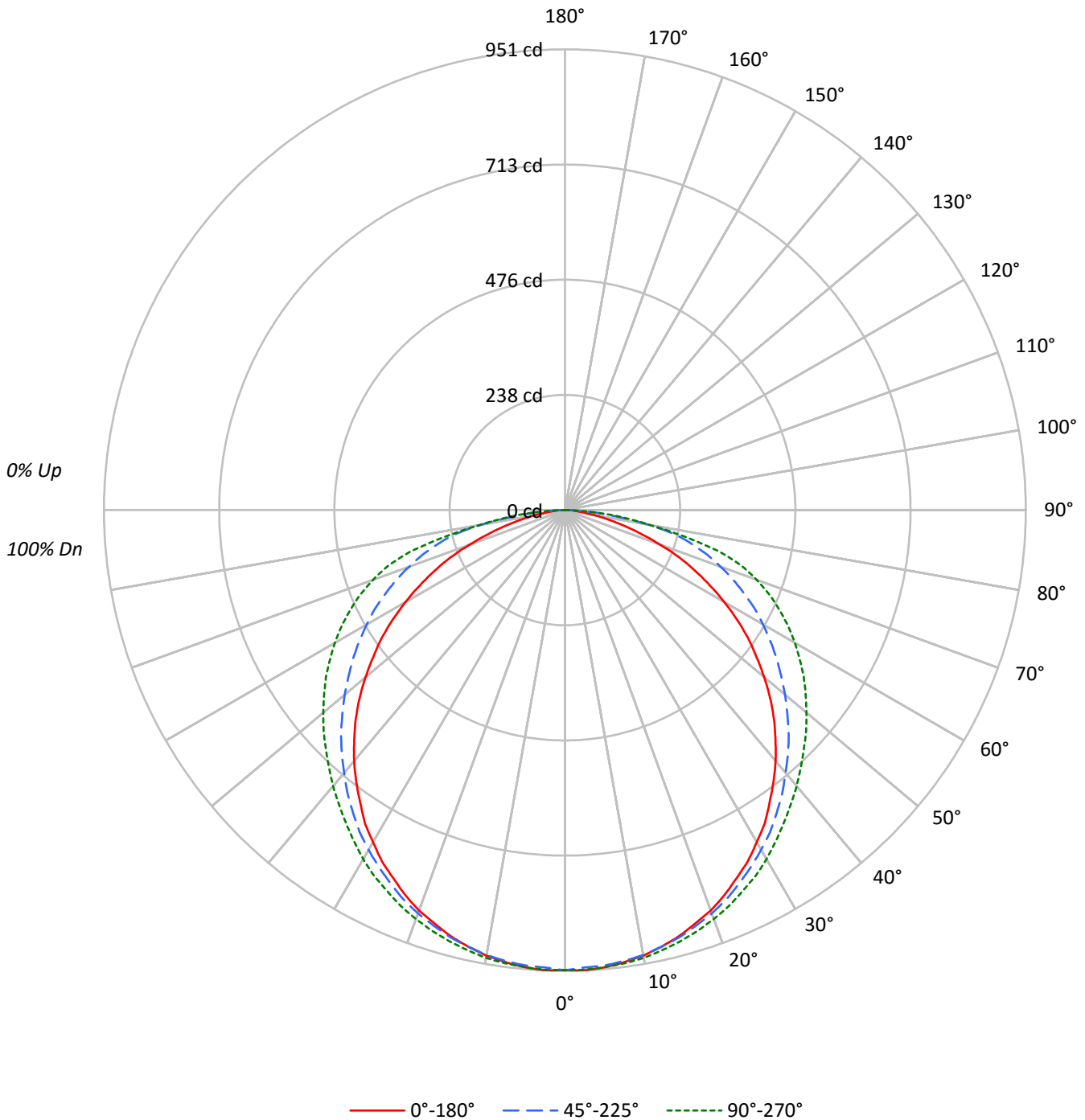
Input Watts (W): 33.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	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	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	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	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1278	1278	1278
5°	1279	1274	1279
10°	1276	1274	1282
15°	1268	1272	1284
20°	1260	1268	1286
25°	1244	1262	1288
30°	1230	1258	1293
35°	1210	1252	1294
40°	1188	1244	1306
45°	1161	1243	1327
50°	1123	1241	1362
55°	1084	1250	1411
60°	1022	1270	1474
65°	944	1299	1557
70°	824	1345	1658
75°	669	1414	1713
80°	494	1386	1386
85°	378	1022	1153



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.0	3.1
10°-20°	258.3	8.8
20°-30°	393.3	13.4
30°-40°	477.6	16.3
40°-50°	504.5	17.2
50°-60°	476.1	16.3
60°-70°	395.8	13.5
70°-80°	260.4	8.9
80°-90°	71.0	2.4
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°	741.6	25.3
0°-40°	1219.1	41.7
0°-60°	2199.7	75.2
0°-90°	2927.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2927.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	950	950	950	950	950	
5°	947	947	944	947	947	90
15°	910	912	913	922	922	257
25°	838	843	850	865	868	387
35°	736	745	762	782	788	461
45°	610	622	653	685	697	470
55°	462	482	533	583	602	411
65°	296	331	408	468	489	293
75°	129	188	272	322	330	139
85°	24	54	66	74	75	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	949.7	949.7	949.7	949.7	949.7
2.5°	950.9	949.7	944.8	949.7	949.7
5°	947.2	947.2	943.5	947.2	947.2
7.5°	941.1	941.1	938.6	943.5	943.5
10°	933.7	933.7	932.5	938.6	938.6
12.5°	922.7	923.9	922.7	930.1	930.1
15°	910.5	911.7	912.9	921.5	921.5
17.5°	894.5	897.0	899.4	909.2	910.5
20°	879.8	881.0	885.9	897.0	898.2
22.5°	860.2	863.9	870.0	881.0	884.7
25°	838.2	843.1	850.4	865.1	867.6
27.5°	817.3	821.0	830.8	846.7	851.6
30°	791.6	797.7	810.0	825.9	832.0
32.5°	767.1	773.2	787.9	805.1	810.0
35°	736.5	745.0	762.2	781.8	787.9
37.5°	707.0	715.6	736.5	758.5	765.9
40°	676.4	686.2	708.3	734.0	743.8
42.5°	643.3	656.8	681.3	709.5	720.5
45°	610.2	622.5	653.1	685.0	697.2
47.5°	574.7	589.4	622.5	660.5	675.2
50°	536.7	555.1	593.1	634.7	650.7
52.5°	498.7	519.6	562.4	609.0	626.2
55°	462.0	481.6	533.0	583.3	601.7
57.5°	421.5	446.0	502.4	556.3	574.7
60°	379.9	406.8	471.8	528.1	547.7
62.5°	338.2	368.8	442.4	498.7	519.6
65°	296.5	330.9	408.1	468.1	488.9
67.5°	256.1	294.1	376.2	436.2	457.1
70°	209.5	257.3	341.9	400.7	421.5
72.5°	166.7	221.8	308.8	363.9	382.3
75°	128.7	187.5	272.0	322.3	329.6
77.5°	94.4	153.2	234.0	251.2	252.4
80°	63.7	122.5	178.9	176.5	178.9
82.5°	41.7	91.9	112.7	126.2	127.4
85°	24.5	53.9	66.2	73.5	74.7
87.5°	12.3	18.4	23.3	24.5	27.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)