

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: P309408

Luminaire Tested: **24FCZ2-40-UNV-L82765-HRP-CP250-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: P309408
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-CP250-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB 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: 2716.0 lumens
Efficiency: N/A
Efficacy: 80.8 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

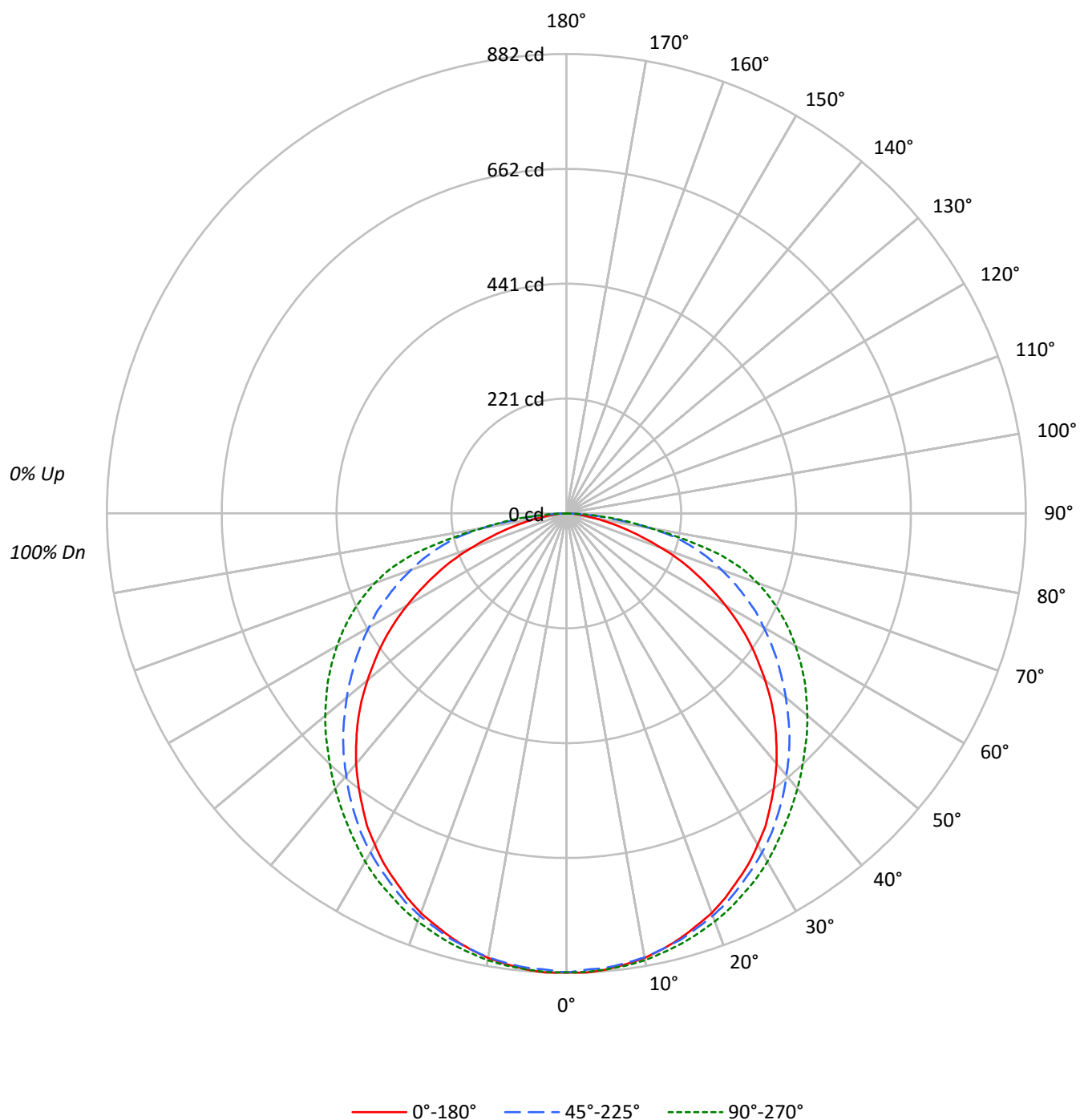
Input Watts (W): 33.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1186	1186	1186
5°	1187	1182	1187
10°	1184	1182	1190
15°	1177	1180	1191
20°	1169	1177	1193
25°	1155	1171	1195
30°	1141	1168	1200
35°	1123	1162	1201
40°	1102	1154	1212
45°	1077	1153	1231
50°	1042	1152	1264
55°	1006	1160	1310
60°	949	1178	1368
65°	876	1205	1444
70°	765	1248	1539
75°	621	1312	1590
80°	458	1286	1286
85°	350	948	1071



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.5	3.1
10°-20°	239.7	8.8
20°-30°	364.9	13.4
30°-40°	443.1	16.3
40°-50°	468.2	17.2
50°-60°	441.8	16.3
60°-70°	367.3	13.5
70°-80°	241.6	8.9
80°-90°	65.9	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°	688.1	25.3
0°-40°	1131.3	41.7
0°-60°	2041.2	75.2
0°-90°	2716.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2716.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	881	881	881	881	881	
5°	879	879	876	879	879	83
15°	845	846	847	855	855	238
25°	778	782	789	803	805	359
35°	683	691	707	725	731	428
45°	566	578	606	636	647	436
55°	429	447	495	541	558	382
65°	275	307	379	434	454	272
75°	119	174	252	299	306	129
85°	23	50	61	68	69	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	881.2	881.2	881.2	881.2	881.2
2.5°	882.3	881.2	876.7	881.2	881.2
5°	878.9	878.9	875.5	878.9	878.9
7.5°	873.2	873.2	871.0	875.5	875.5
10°	866.4	866.4	865.3	871.0	871.0
12.5°	856.2	857.3	856.2	863.0	863.0
15°	844.8	846.0	847.1	855.1	855.1
17.5°	830.0	832.3	834.6	843.7	844.8
20°	816.4	817.5	822.1	832.3	833.5
22.5°	798.2	801.6	807.3	817.5	820.9
25°	777.7	782.3	789.1	802.8	805.0
27.5°	758.4	761.8	770.9	785.7	790.2
30°	734.5	740.2	751.6	766.4	772.1
32.5°	711.8	717.5	731.1	747.0	751.6
35°	683.4	691.3	707.2	725.4	731.1
37.5°	656.1	664.0	683.4	703.8	710.7
40°	627.6	636.7	657.2	681.1	690.2
42.5°	596.9	609.5	632.2	658.3	668.6
45°	566.2	577.6	606.0	635.6	647.0
47.5°	533.3	546.9	577.6	612.9	626.5
50°	498.0	515.1	550.3	589.0	603.8
52.5°	462.8	482.1	521.9	565.1	581.0
55°	428.7	446.9	494.6	541.2	558.3
57.5°	391.1	413.9	466.2	516.2	533.3
60°	352.5	377.5	437.8	490.1	508.3
62.5°	313.8	342.2	410.5	462.8	482.1
65°	275.2	307.0	378.6	434.4	453.7
67.5°	237.6	272.9	349.1	404.8	424.1
70°	194.4	238.8	317.2	371.8	391.1
72.5°	154.6	205.8	286.5	337.7	354.8
75°	119.4	174.0	252.4	299.0	305.9
77.5°	87.6	142.1	217.2	233.1	234.2
80°	59.1	113.7	166.0	163.7	166.0
82.5°	38.7	85.3	104.6	117.1	118.3
85°	22.7	50.0	61.4	68.2	69.4
87.5°	11.4	17.1	21.6	22.7	25.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)