

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: P311434

Luminaire Tested: **24FCZ2-40-UNV-L82765-S-CP250-W2A-U-6500K**

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: P311434
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CP250-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (168) 6500K 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: 3772.0 lumens
Efficiency: N/A
Efficacy: 110.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

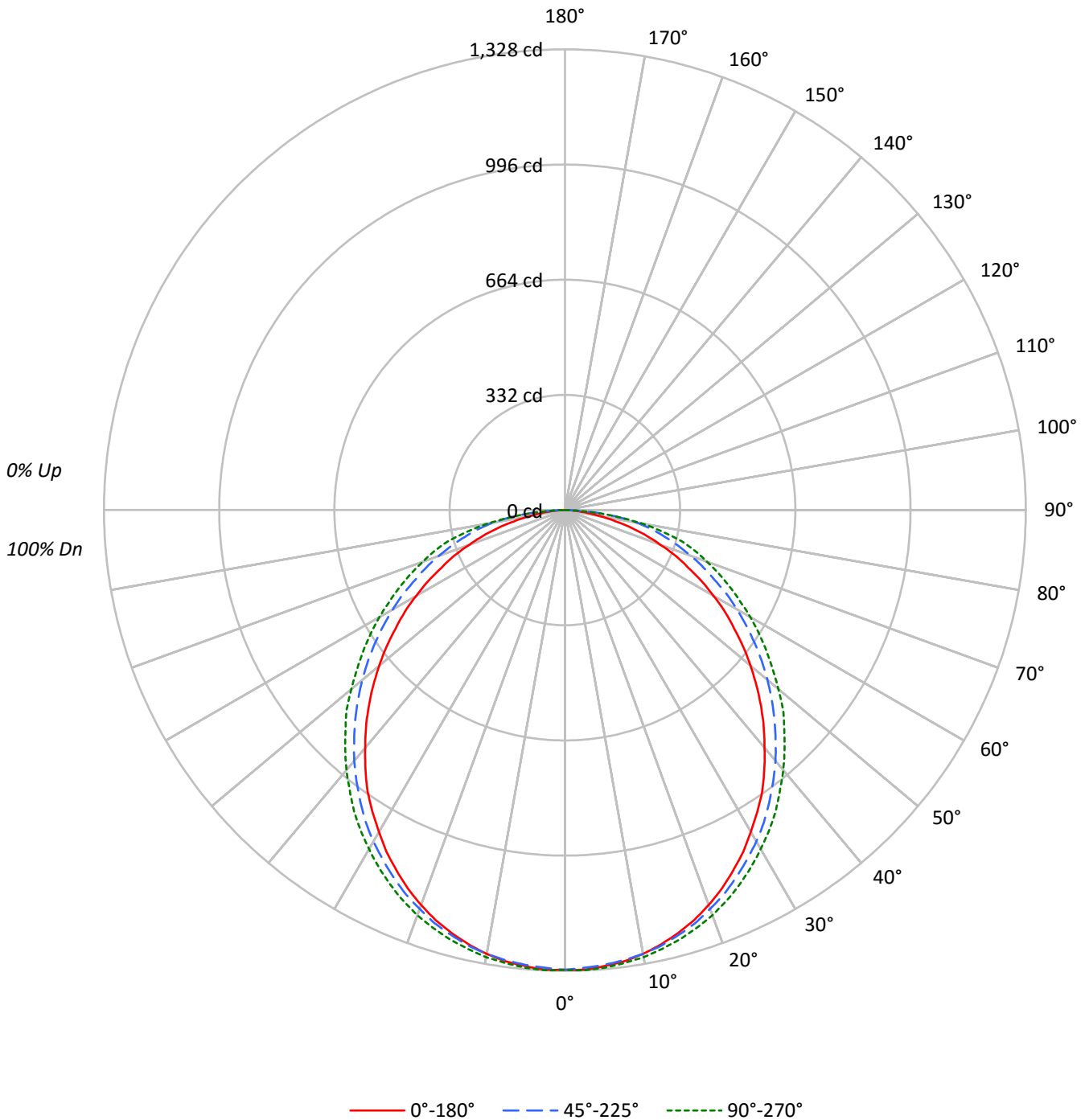
Input Watts (W): 34.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1783	1783	1783
5°	1782	1777	1788
10°	1774	1774	1788
15°	1757	1766	1784
20°	1734	1752	1779
25°	1702	1734	1768
30°	1664	1714	1753
35°	1628	1687	1740
40°	1572	1658	1719
45°	1521	1626	1701
50°	1462	1595	1680
55°	1397	1566	1664
60°	1331	1541	1660
65°	1247	1514	1671
70°	1155	1522	1716
75°	1034	1551	1813
80°	835	1643	1773
85°	628	1443	1406



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.4	3.3
10°-20°	358.5	9.5
20°-30°	538.8	14.3
30°-40°	641.8	17.0
40°-50°	656.9	17.4
50°-60°	591.4	15.7
60°-70°	464.4	12.3
70°-80°	301.4	8.0
80°-90°	93.2	2.5
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°	1022.7	27.1
0°-40°	1664.6	44.1
0°-60°	2912.9	77.2
0°-90°	3772.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3772.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1325	1325	1325	1325	1325	
5°	1319	1322	1316	1323	1324	125
15°	1262	1265	1268	1278	1281	356
25°	1147	1156	1168	1187	1191	528
35°	991	1003	1027	1052	1059	618
45°	799	818	854	887	894	616
55°	596	622	667	702	709	534
65°	392	422	476	515	525	390
75°	199	237	298	339	349	210
85°	41	76	94	91	91	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1325.1	1325.1	1325.1	1325.1	1325.1
2.5°	1326.3	1326.3	1320.3	1326.3	1327.5
5°	1319.1	1321.5	1315.5	1322.7	1323.9
7.5°	1311.9	1311.9	1308.4	1315.5	1316.7
10°	1298.8	1300.0	1298.8	1307.2	1308.4
12.5°	1282.0	1284.4	1285.6	1294.0	1295.2
15°	1261.6	1265.2	1267.6	1278.4	1280.8
17.5°	1238.9	1242.5	1248.4	1260.4	1262.8
20°	1211.3	1216.1	1223.3	1238.9	1242.5
22.5°	1181.4	1186.1	1198.1	1212.5	1218.5
25°	1146.6	1156.2	1168.2	1187.3	1190.9
27.5°	1111.9	1120.2	1135.8	1156.2	1161.0
30°	1071.1	1084.3	1103.5	1123.8	1128.6
32.5°	1031.6	1044.8	1067.5	1089.1	1095.1
35°	990.9	1002.8	1026.8	1052.0	1059.1
37.5°	944.1	959.7	986.1	1011.2	1018.4
40°	895.0	914.2	944.1	970.5	978.9
42.5°	848.3	868.6	898.6	927.4	936.9
45°	799.2	818.3	854.3	886.6	893.8
47.5°	748.8	770.4	808.7	841.1	853.1
50°	698.5	721.3	762.0	795.6	802.7
52.5°	648.2	672.1	715.3	751.2	754.8
55°	595.5	621.8	667.4	702.1	709.3
57.5°	547.5	570.3	619.4	655.4	663.8
60°	494.8	520.0	572.7	606.3	617.0
62.5°	444.5	470.9	526.0	559.5	569.1
65°	391.8	421.7	475.7	515.2	524.8
67.5°	346.3	375.0	432.5	470.9	480.4
70°	293.5	325.9	387.0	426.5	436.1
72.5°	248.0	281.6	342.7	381.0	395.4
75°	198.9	237.2	298.3	339.1	348.7
77.5°	151.0	195.3	257.6	288.7	288.7
80°	107.8	154.6	212.1	226.4	228.8
82.5°	70.7	116.2	157.0	155.8	155.8
85°	40.7	75.5	93.5	91.1	91.1
87.5°	15.6	31.2	33.5	33.5	32.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)