

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: P314267

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-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: P314267
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: 24FCZ2-40HE-UNV-L83050-S-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 4000K 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: 4108.0 lumens
Efficiency: N/A
Efficacy: 132.1 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

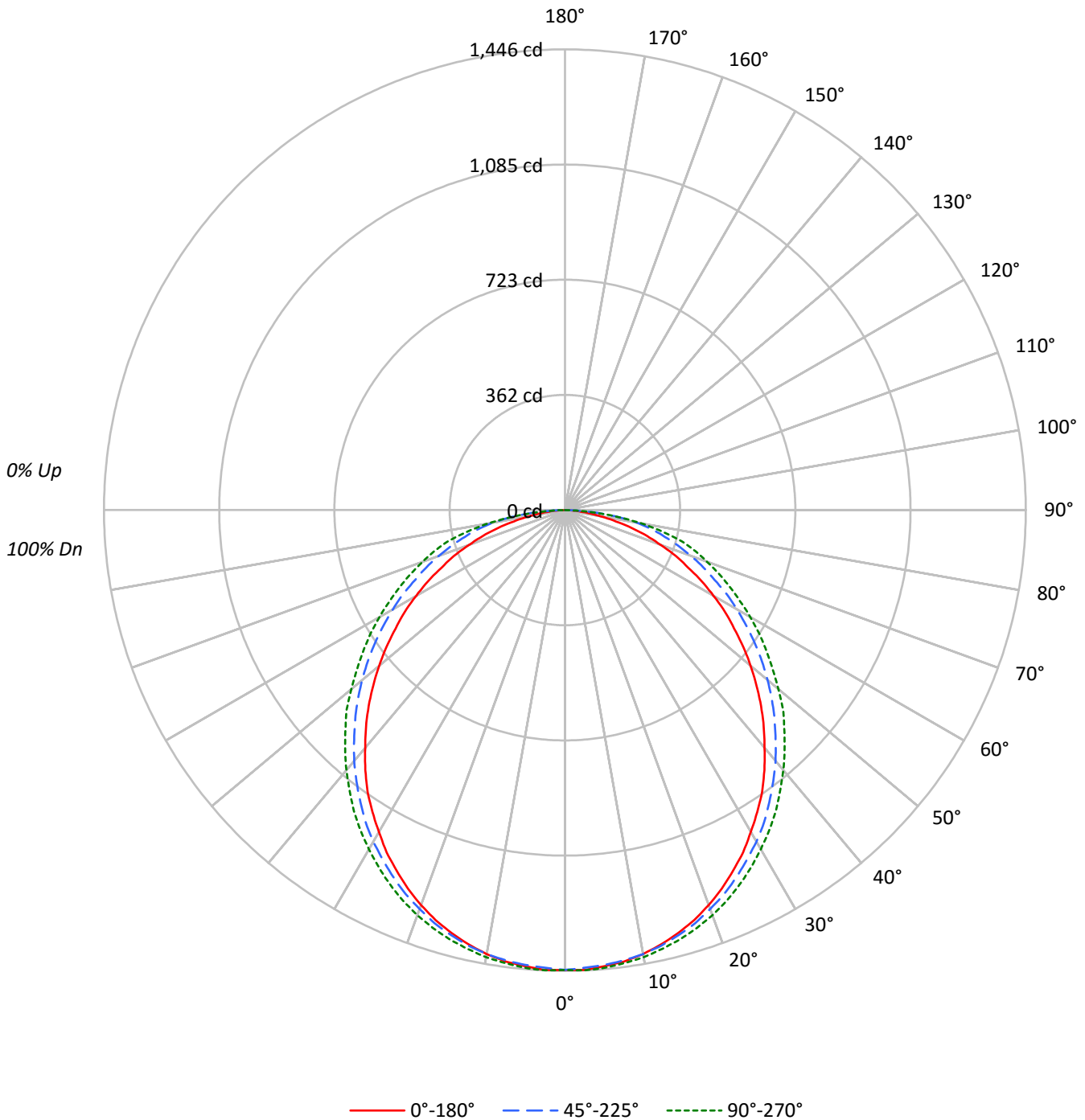
Input Watts (W): 31.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1942	1942	1942
5°	1940	1935	1947
10°	1933	1933	1947
15°	1914	1923	1943
20°	1889	1908	1937
25°	1854	1889	1926
30°	1812	1867	1910
35°	1772	1837	1895
40°	1712	1806	1873
45°	1656	1770	1852
50°	1592	1737	1830
55°	1521	1705	1812
60°	1450	1678	1808
65°	1358	1649	1819
70°	1258	1658	1869
75°	1126	1689	1974
80°	910	1790	1931
85°	685	1572	1531



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.6	3.3
10°-20°	390.4	9.5
20°-30°	586.8	14.3
30°-40°	699.0	17.0
40°-50°	715.4	17.4
50°-60°	644.1	15.7
60°-70°	505.8	12.3
70°-80°	328.3	8.0
80°-90°	101.5	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°	1113.9	27.1
0°-40°	1812.9	44.1
0°-60°	3172.4	77.2
0°-90°	4108.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4108.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1443	1443	1443	1443	1443	
5°	1437	1439	1433	1441	1442	137
15°	1374	1378	1380	1392	1395	387
25°	1249	1259	1272	1293	1297	575
35°	1079	1092	1118	1146	1154	673
45°	870	891	930	966	973	671
55°	648	677	727	765	772	581
65°	427	459	518	561	572	425
75°	217	258	325	369	380	229
85°	44	82	102	99	99	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1443.2	1443.2	1443.2	1443.2	1443.2
2.5°	1444.5	1444.5	1437.9	1444.5	1445.8
5°	1436.6	1439.3	1432.7	1440.6	1441.9
7.5°	1428.8	1428.8	1424.9	1432.7	1434.0
10°	1414.5	1415.8	1414.5	1423.6	1424.9
12.5°	1396.2	1398.8	1400.1	1409.2	1410.5
15°	1374.0	1377.9	1380.5	1392.3	1394.9
17.5°	1349.2	1353.1	1359.7	1372.7	1375.3
20°	1319.2	1324.4	1332.3	1349.2	1353.1
22.5°	1286.6	1291.8	1304.9	1320.5	1327.0
25°	1248.7	1259.2	1272.2	1293.1	1297.0
27.5°	1210.9	1220.0	1237.0	1259.2	1264.4
30°	1166.5	1180.9	1201.8	1224.0	1229.2
32.5°	1123.5	1137.8	1162.6	1186.1	1192.6
35°	1079.1	1092.2	1118.3	1145.7	1153.5
37.5°	1028.2	1045.2	1073.9	1101.3	1109.1
40°	974.7	995.6	1028.2	1056.9	1066.1
42.5°	923.8	946.0	978.6	1010.0	1020.4
45°	870.3	891.2	930.4	965.6	973.4
47.5°	815.5	839.0	880.8	916.0	929.1
50°	760.7	785.5	829.9	866.4	874.3
52.5°	705.9	732.0	779.0	818.1	822.1
55°	648.5	677.2	726.8	764.6	772.5
57.5°	596.3	621.1	674.6	713.8	722.9
60°	538.9	566.3	623.7	660.3	672.0
62.5°	484.1	512.8	572.8	609.4	619.8
65°	426.7	459.3	518.0	561.1	571.5
67.5°	377.1	408.4	471.1	512.8	523.2
70°	319.7	354.9	421.5	464.5	475.0
72.5°	270.1	306.6	373.2	414.9	430.6
75°	216.6	258.4	324.9	369.3	379.7
77.5°	164.4	212.7	280.5	314.5	314.5
80°	117.4	168.3	231.0	246.6	249.2
82.5°	77.0	126.6	170.9	169.6	169.6
85°	44.4	82.2	101.8	99.2	99.2
87.5°	17.0	33.9	36.5	36.5	35.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)