

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: P310945

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-CA08-W2A-U-5000K**

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: P310945
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-55HE-UNV-L82765-CA08-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 5000K 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: 5225.0 lumens
Efficiency: N/A
Efficacy: 118.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

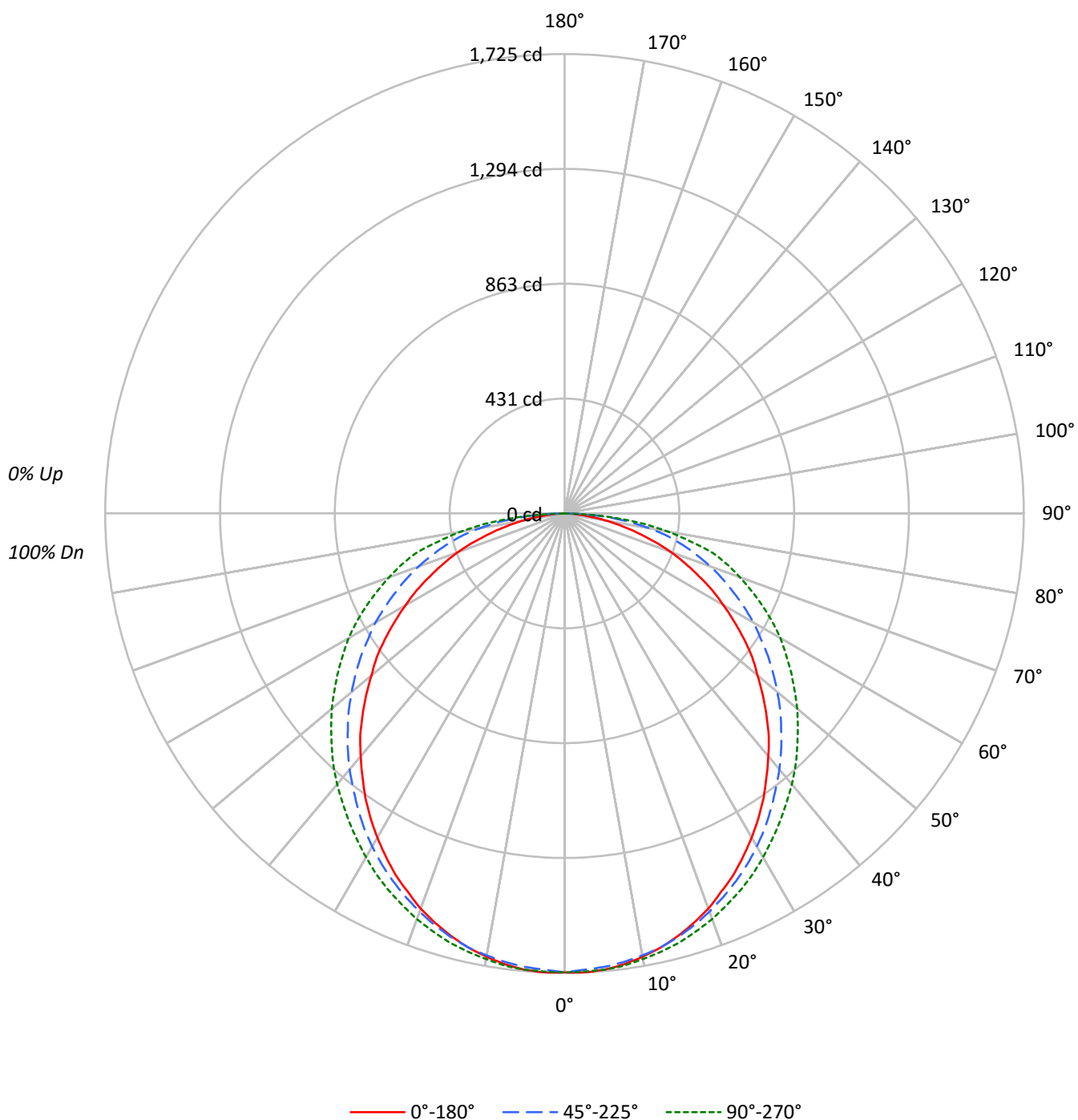
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	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	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2319	2319	2319
5°	2323	2309	2323
10°	2309	2302	2321
15°	2289	2294	2323
20°	2261	2279	2321
25°	2226	2262	2319
30°	2184	2244	2316
35°	2141	2221	2318
40°	2092	2204	2332
45°	2042	2190	2352
50°	1981	2184	2388
55°	1932	2188	2436
60°	1857	2207	2519
65°	1772	2230	2611
70°	1678	2298	2755
75°	1496	2397	3010
80°	1276	2538	3076
85°	909	2516	2944



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.1	3.1
10°-20°	466.3	8.9
20°-30°	704.3	13.5
30°-40°	848.8	16.2
40°-50°	891.1	17.1
50°-60°	833.7	16.0
60°-70°	688.5	13.2
70°-80°	469.1	9.0
80°-90°	160.0	3.1
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°	1333.7	25.5
0°-40°	2182.5	41.8
0°-60°	3907.4	74.8
0°-90°	5225.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5225.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1723	1723	1723	1723	1723	
5°	1720	1718	1709	1720	1720	163
15°	1643	1645	1647	1664	1668	463
25°	1500	1506	1524	1553	1562	690
35°	1304	1318	1352	1397	1411	815
45°	1073	1096	1151	1214	1236	828
55°	823	856	933	1009	1038	735
65°	556	603	700	789	820	552
75°	288	354	461	548	579	307
85°	59	116	163	184	191	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1723.2	1723.2	1723.2	1723.2	1723.2
2.5°	1724.9	1723.2	1714.5	1723.2	1721.4
5°	1719.7	1718.0	1709.3	1719.7	1719.7
7.5°	1707.6	1707.6	1698.9	1711.0	1712.8
10°	1690.2	1690.2	1685.0	1698.9	1698.9
12.5°	1669.4	1669.4	1669.4	1683.3	1685.0
15°	1643.4	1645.1	1646.9	1664.2	1667.7
17.5°	1612.2	1615.7	1620.9	1641.7	1645.1
20°	1579.3	1582.7	1591.4	1615.7	1620.9
22.5°	1537.7	1546.3	1558.5	1586.2	1591.4
25°	1499.5	1506.5	1523.8	1553.3	1561.9
27.5°	1452.7	1463.1	1485.7	1516.9	1529.0
30°	1405.9	1416.3	1444.1	1480.5	1490.9
32.5°	1355.6	1371.2	1400.7	1438.9	1451.0
35°	1303.6	1317.5	1352.2	1397.3	1411.1
37.5°	1246.4	1265.5	1303.6	1352.2	1369.5
40°	1191.0	1211.8	1255.1	1307.1	1327.9
42.5°	1135.5	1156.3	1204.8	1263.8	1284.6
45°	1073.1	1095.6	1151.1	1213.5	1236.0
47.5°	1010.7	1038.4	1099.1	1165.0	1189.2
50°	946.5	977.7	1043.6	1112.9	1140.7
52.5°	889.3	918.8	988.1	1062.7	1088.7
55°	823.4	856.4	932.7	1008.9	1038.4
57.5°	755.8	792.2	873.7	956.9	986.4
60°	690.0	729.8	820.0	903.2	936.1
62.5°	625.8	665.7	759.3	846.0	878.9
65°	556.5	603.3	700.4	788.8	820.0
67.5°	490.6	540.9	643.2	729.8	761.0
70°	426.5	475.0	584.2	669.2	700.4
72.5°	357.1	412.6	521.8	610.2	643.2
75°	287.8	353.6	461.1	547.8	579.0
77.5°	223.6	291.2	398.7	469.8	485.4
80°	164.7	234.0	327.6	377.9	397.0
82.5°	105.7	175.1	249.6	286.0	301.6
85°	58.9	116.1	163.0	183.8	190.7
87.5°	24.3	50.3	65.9	74.5	74.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)