

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: P313292

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-HRP-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: P313292
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: 24FCZ2-55HE-UNV-L83050-HRP-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 4139.0 lumens
Efficiency: N/A
Efficacy: 93.9 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

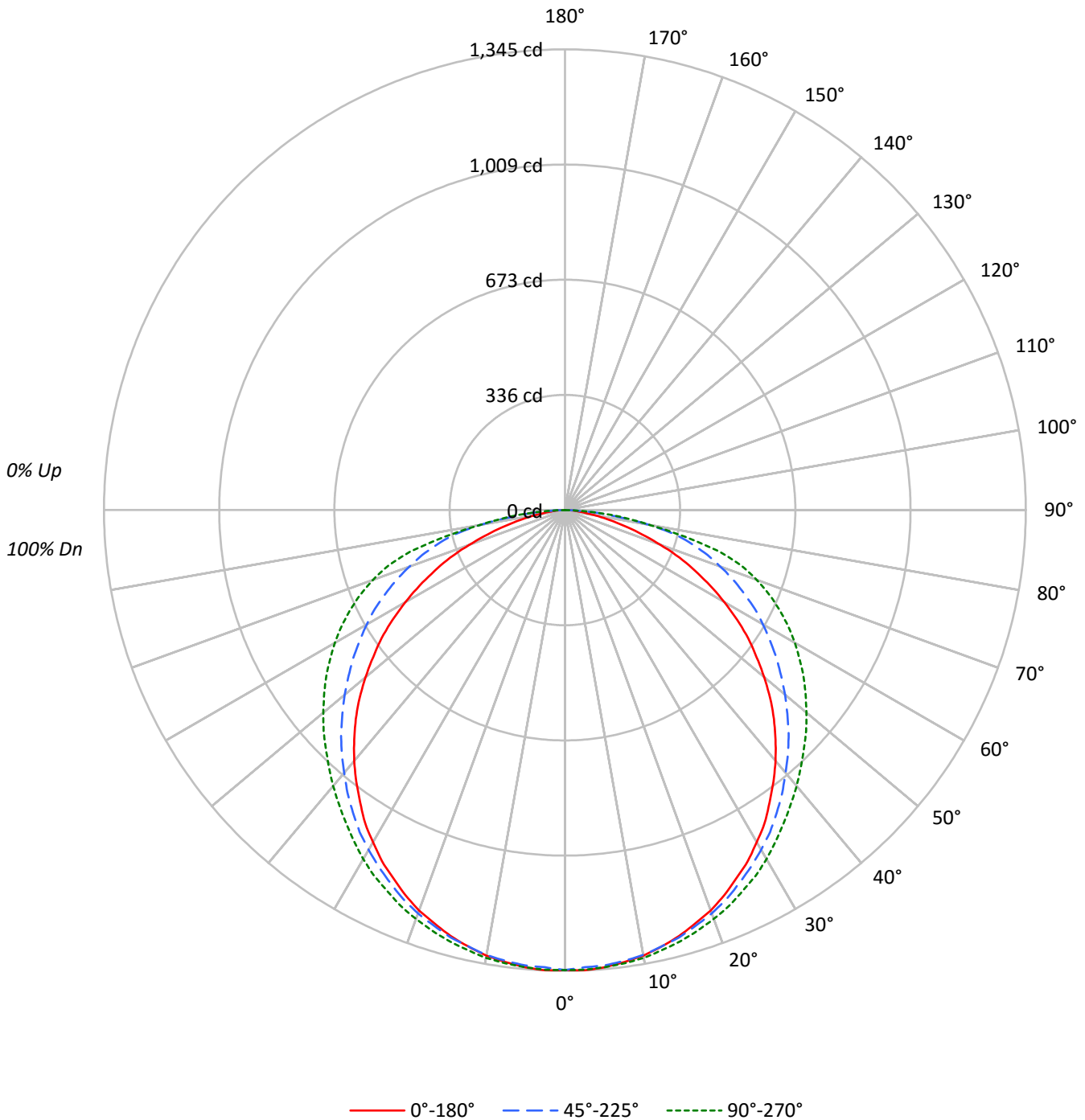
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1807	1807	1807
5°	1809	1802	1809
10°	1804	1802	1813
15°	1793	1798	1815
20°	1781	1794	1819
25°	1760	1785	1821
30°	1739	1780	1828
35°	1711	1770	1830
40°	1680	1759	1847
45°	1642	1757	1876
50°	1589	1756	1926
55°	1533	1768	1996
60°	1446	1795	2084
65°	1335	1837	2201
70°	1166	1902	2345
75°	946	2000	2423
80°	698	1960	1960
85°	536	1445	1632



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.2	3.1
10°-20°	365.3	8.8
20°-30°	556.1	13.4
30°-40°	675.3	16.3
40°-50°	713.5	17.2
50°-60°	673.2	16.3
60°-70°	559.7	13.5
70°-80°	368.3	8.9
80°-90°	100.4	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°	1048.7	25.3
0°-40°	1724.0	41.7
0°-60°	3110.6	75.2
0°-90°	4139.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4139.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1343	1343	1343	1343	1343	
5°	1339	1339	1334	1339	1339	127
15°	1288	1289	1291	1303	1303	363
25°	1185	1192	1202	1223	1227	547
35°	1041	1054	1078	1106	1114	652
45°	863	880	924	969	986	665
55°	653	681	754	825	851	582
65°	419	468	577	662	691	415
75°	182	265	385	456	466	196
85°	35	76	94	104	106	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1342.9	1342.9	1342.9	1342.9	1342.9
2.5°	1344.6	1342.9	1336.0	1342.9	1342.9
5°	1339.4	1339.4	1334.2	1339.4	1339.4
7.5°	1330.8	1330.8	1327.3	1334.2	1334.2
10°	1320.4	1320.4	1318.6	1327.3	1327.3
12.5°	1304.8	1306.5	1304.8	1315.2	1315.2
15°	1287.5	1289.2	1290.9	1303.0	1303.0
17.5°	1264.9	1268.4	1271.9	1285.7	1287.5
20°	1244.1	1245.9	1252.8	1268.4	1270.1
22.5°	1216.4	1221.6	1230.3	1245.9	1251.1
25°	1185.2	1192.2	1202.5	1223.3	1226.8
27.5°	1155.8	1161.0	1174.8	1197.3	1204.3
30°	1119.4	1128.0	1145.4	1167.9	1176.6
32.5°	1084.7	1093.4	1114.2	1138.4	1145.4
35°	1041.4	1053.5	1077.8	1105.5	1114.2
37.5°	999.8	1011.9	1041.4	1072.6	1083.0
40°	956.5	970.4	1001.5	1037.9	1051.8
42.5°	909.7	928.8	963.4	1003.3	1018.9
45°	862.9	880.3	923.6	968.6	985.9
47.5°	812.7	833.5	880.3	934.0	954.8
50°	759.0	784.9	838.7	897.6	920.1
52.5°	705.2	734.7	795.3	861.2	885.4
55°	653.3	681.0	753.8	824.8	850.8
57.5°	596.1	630.7	710.4	786.7	812.7
60°	537.2	575.3	667.1	746.8	774.6
62.5°	478.2	521.6	625.5	705.2	734.7
65°	419.3	467.8	577.0	661.9	691.4
67.5°	362.2	415.9	532.0	616.9	646.3
70°	296.3	363.9	483.4	566.6	596.1
72.5°	235.7	313.6	436.7	514.6	540.6
75°	181.9	265.1	384.7	455.7	466.1
77.5°	133.4	216.6	331.0	355.2	357.0
80°	90.1	173.3	253.0	249.5	253.0
82.5°	58.9	130.0	159.4	178.5	180.2
85°	34.7	76.2	93.6	104.0	105.7
87.5°	17.3	26.0	32.9	34.7	38.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)