

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: P309596

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-HRP-CA08-W2A-U-5500K**

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: P309596
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-L82765-HRP-CA08-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 5500K 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: 4003.0 lumens
Efficiency: N/A
Efficacy: 90.4 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

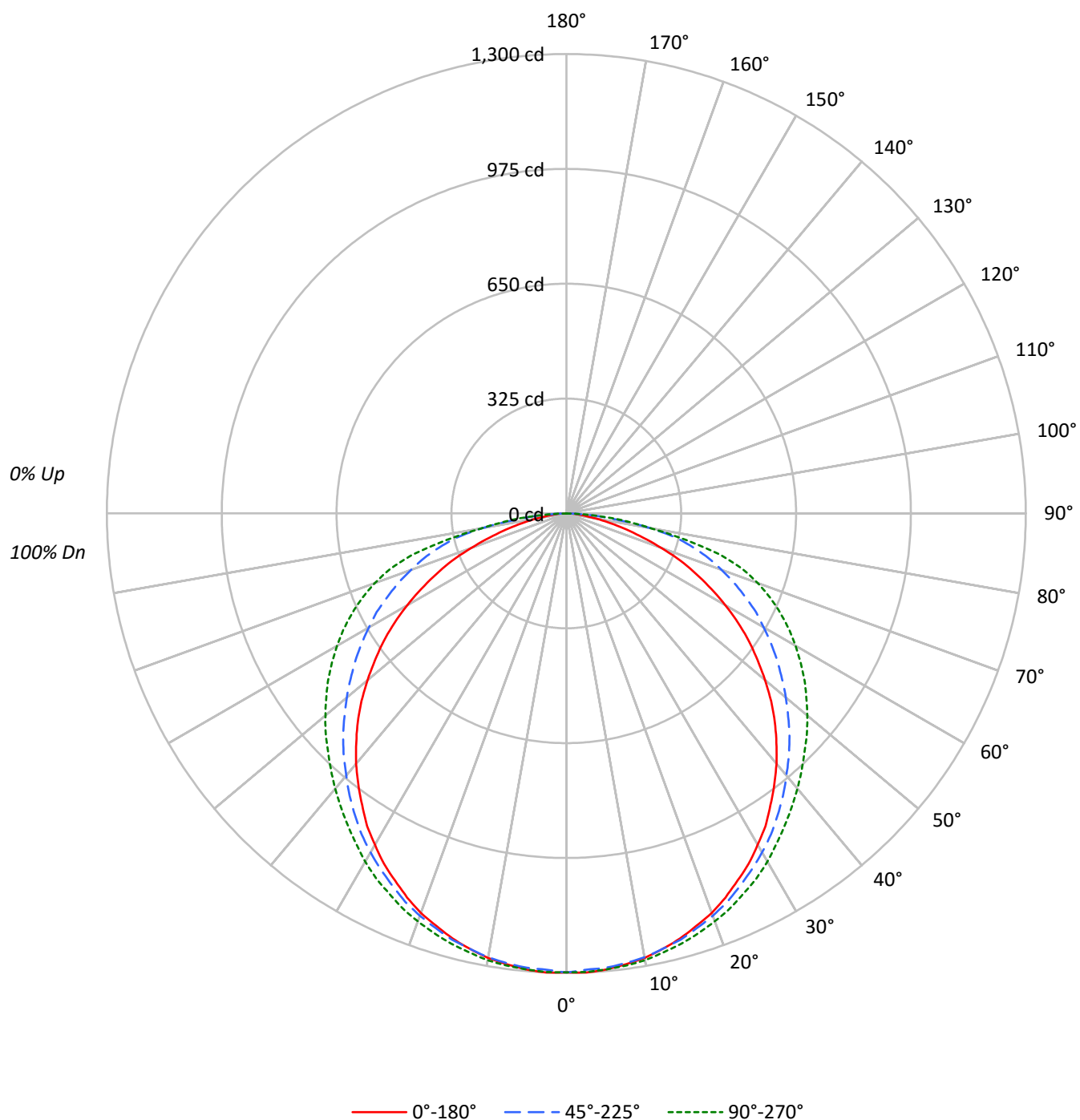
Input Watts (W): 44.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1748	1748	1748
5°	1750	1743	1750
10°	1745	1742	1754
15°	1734	1739	1755
20°	1723	1735	1759
25°	1702	1727	1761
30°	1682	1721	1768
35°	1654	1712	1770
40°	1625	1701	1787
45°	1588	1700	1815
50°	1536	1698	1863
55°	1482	1710	1930
60°	1398	1736	2016
65°	1291	1777	2129
70°	1127	1840	2268
75°	915	1934	2344
80°	675	1896	1896
85°	517	1397	1578



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.0	3.1
10°-20°	353.3	8.8
20°-30°	537.9	13.4
30°-40°	653.1	16.3
40°-50°	690.0	17.2
50°-60°	651.1	16.3
60°-70°	541.4	13.5
70°-80°	356.1	8.9
80°-90°	97.1	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°	1014.2	25.3
0°-40°	1667.3	41.7
0°-60°	3008.4	75.2
0°-90°	4003.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4003.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1299	1299	1299	1299	1299	
5°	1295	1295	1290	1295	1295	123
15°	1245	1247	1248	1260	1260	351
25°	1146	1153	1163	1183	1186	529
35°	1007	1019	1042	1069	1078	631
45°	835	851	893	937	954	643
55°	632	659	729	798	823	563
65°	406	452	558	640	669	401
75°	176	256	372	441	451	190
85°	34	74	90	101	102	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1298.8	1298.8	1298.8	1298.8	1298.8
2.5°	1300.5	1298.8	1292.1	1298.8	1298.8
5°	1295.4	1295.4	1290.4	1295.4	1295.4
7.5°	1287.0	1287.0	1283.7	1290.4	1290.4
10°	1277.0	1277.0	1275.3	1283.7	1283.7
12.5°	1261.9	1263.6	1261.9	1272.0	1272.0
15°	1245.1	1246.8	1248.5	1260.2	1260.2
17.5°	1223.4	1226.7	1230.1	1243.5	1245.1
20°	1203.3	1204.9	1211.6	1226.7	1228.4
22.5°	1176.4	1181.5	1189.8	1204.9	1210.0
25°	1146.3	1153.0	1163.0	1183.1	1186.5
27.5°	1117.8	1122.8	1136.2	1158.0	1164.7
30°	1082.6	1091.0	1107.7	1129.5	1137.9
32.5°	1049.1	1057.5	1077.6	1101.0	1107.7
35°	1007.2	1018.9	1042.4	1069.2	1077.6
37.5°	967.0	978.7	1007.2	1037.3	1047.4
40°	925.1	938.5	968.6	1003.8	1017.2
42.5°	879.8	898.3	931.8	970.3	985.4
45°	834.6	851.3	893.2	936.8	953.6
47.5°	786.0	806.1	851.3	903.3	923.4
50°	734.0	759.2	811.1	868.1	889.9
52.5°	682.1	710.6	769.2	832.9	856.4
55°	631.8	658.6	729.0	797.7	822.8
57.5°	576.5	610.0	687.1	760.8	786.0
60°	519.5	556.4	645.2	722.3	749.1
62.5°	462.5	504.4	605.0	682.1	710.6
65°	405.6	452.5	558.1	640.2	668.7
67.5°	350.3	402.2	514.5	596.6	625.1
70°	286.6	351.9	467.6	548.0	576.5
72.5°	227.9	303.3	422.3	497.7	522.9
75°	176.0	256.4	372.0	440.7	450.8
77.5°	129.0	209.5	320.1	343.5	345.2
80°	87.1	167.6	244.7	241.3	244.7
82.5°	57.0	125.7	154.2	172.6	174.3
85°	33.5	73.7	90.5	100.6	102.2
87.5°	16.8	25.1	31.8	33.5	36.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)