

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: P313297

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-HRP-CA125-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: P313297
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-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" 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: 4124.0 lumens
Efficiency: N/A
Efficacy: 93.5 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

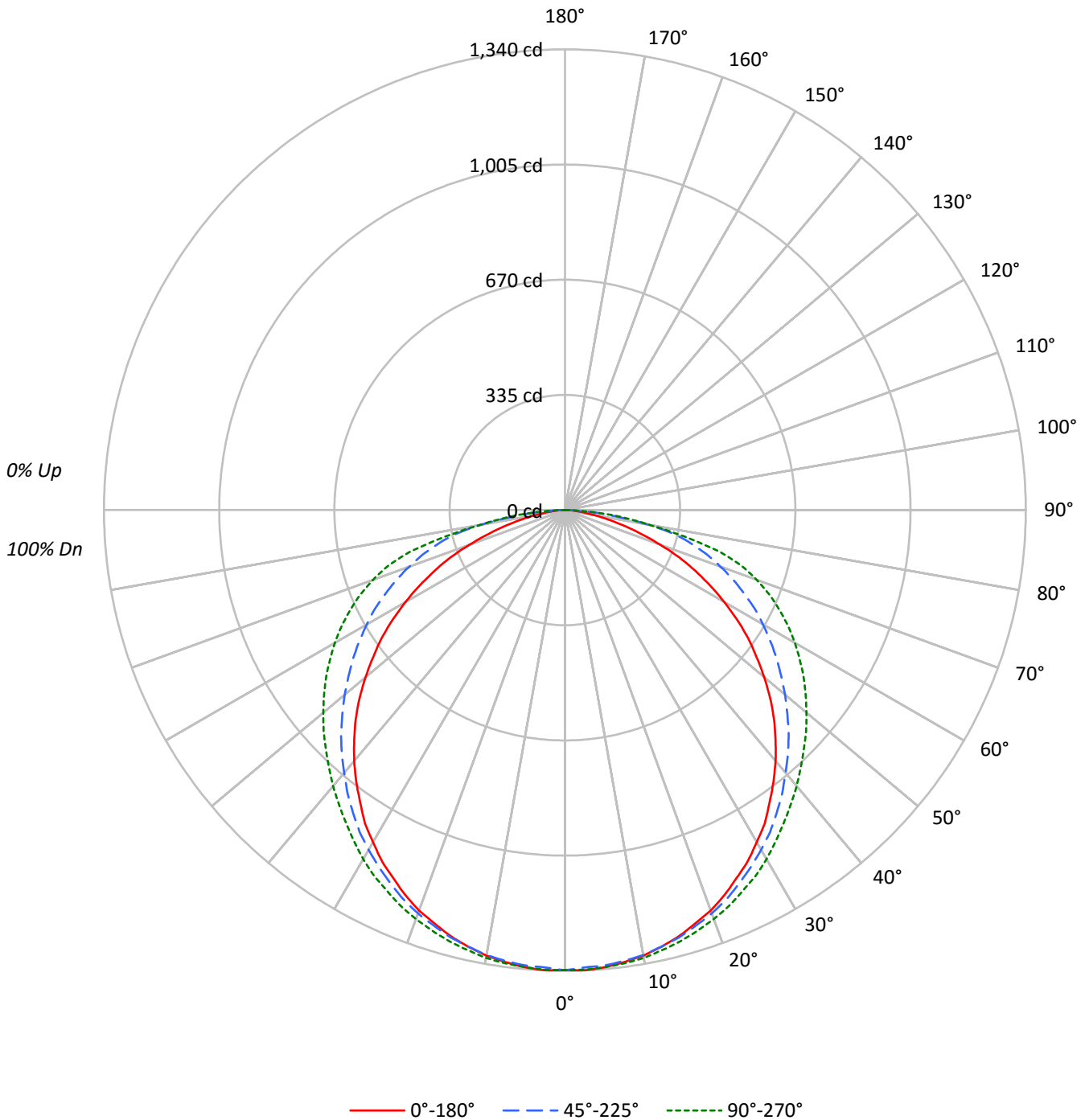
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1800	1800	1800
5°	1803	1796	1803
10°	1797	1795	1807
15°	1787	1792	1808
20°	1775	1787	1812
25°	1753	1779	1815
30°	1733	1773	1821
35°	1704	1764	1823
40°	1674	1753	1841
45°	1636	1751	1869
50°	1583	1749	1919
55°	1527	1762	1989
60°	1440	1789	2077
65°	1330	1830	2193
70°	1161	1895	2336
75°	943	1993	2414
80°	696	1953	1953
85°	533	1439	1626



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.8	3.1
10°-20°	364.0	8.8
20°-30°	554.1	13.4
30°-40°	672.8	16.3
40°-50°	710.9	17.2
50°-60°	670.8	16.3
60°-70°	557.7	13.5
70°-80°	366.9	8.9
80°-90°	100.0	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°	1044.9	25.3
0°-40°	1717.7	41.7
0°-60°	3099.3	75.2
0°-90°	4124.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4124.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1338	1338	1338	1338	1338	
5°	1335	1335	1329	1335	1335	127
15°	1283	1284	1286	1298	1298	362
25°	1181	1188	1198	1219	1222	545
35°	1038	1050	1074	1102	1110	650
45°	860	877	920	965	982	662
55°	651	678	751	822	848	580
65°	418	466	575	660	689	413
75°	181	264	383	454	464	195
85°	34	76	93	104	105	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1338.0	1338.0	1338.0	1338.0	1338.0
2.5°	1339.8	1338.0	1331.1	1338.0	1338.0
5°	1334.6	1334.6	1329.4	1334.6	1334.6
7.5°	1325.9	1325.9	1322.5	1329.4	1329.4
10°	1315.6	1315.6	1313.9	1322.5	1322.5
12.5°	1300.1	1301.8	1300.1	1310.4	1310.4
15°	1282.8	1284.5	1286.2	1298.3	1298.3
17.5°	1260.3	1263.8	1267.2	1281.1	1282.8
20°	1239.6	1241.4	1248.3	1263.8	1265.5
22.5°	1212.0	1217.2	1225.8	1241.4	1246.5
25°	1180.9	1187.8	1198.2	1218.9	1222.4
27.5°	1151.6	1156.8	1170.6	1193.0	1199.9
30°	1115.3	1123.9	1141.2	1163.7	1172.3
32.5°	1080.8	1089.4	1110.1	1134.3	1141.2
35°	1037.6	1049.7	1073.9	1101.5	1110.1
37.5°	996.2	1008.3	1037.6	1068.7	1079.1
40°	953.0	966.8	997.9	1034.2	1048.0
42.5°	906.4	925.4	959.9	999.6	1015.2
45°	859.8	877.1	920.2	965.1	982.4
47.5°	809.7	830.4	877.1	930.6	951.3
50°	756.2	782.1	835.6	894.3	916.8
52.5°	702.7	732.0	792.5	858.1	882.2
55°	650.9	678.5	751.0	821.8	847.7
57.5°	593.9	628.4	707.9	783.8	809.7
60°	535.2	573.2	664.7	744.1	771.7
62.5°	476.5	519.7	623.3	702.7	732.0
65°	417.8	466.2	574.9	659.5	688.9
67.5°	360.8	414.4	530.0	614.6	644.0
70°	295.2	362.6	481.7	564.6	593.9
72.5°	234.8	312.5	435.1	512.8	538.7
75°	181.3	264.2	383.3	454.1	464.4
77.5°	132.9	215.8	329.8	353.9	355.7
80°	89.8	172.6	252.1	248.6	252.1
82.5°	58.7	129.5	158.8	177.8	179.6
85°	34.5	76.0	93.2	103.6	105.3
87.5°	17.3	25.9	32.8	34.5	38.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)