

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: P309603

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-HRP-CA125-W2A-U-4500K**

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: P309603
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-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4500K 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: 3896.0 lumens
Efficiency: N/A
Efficacy: 88.7 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

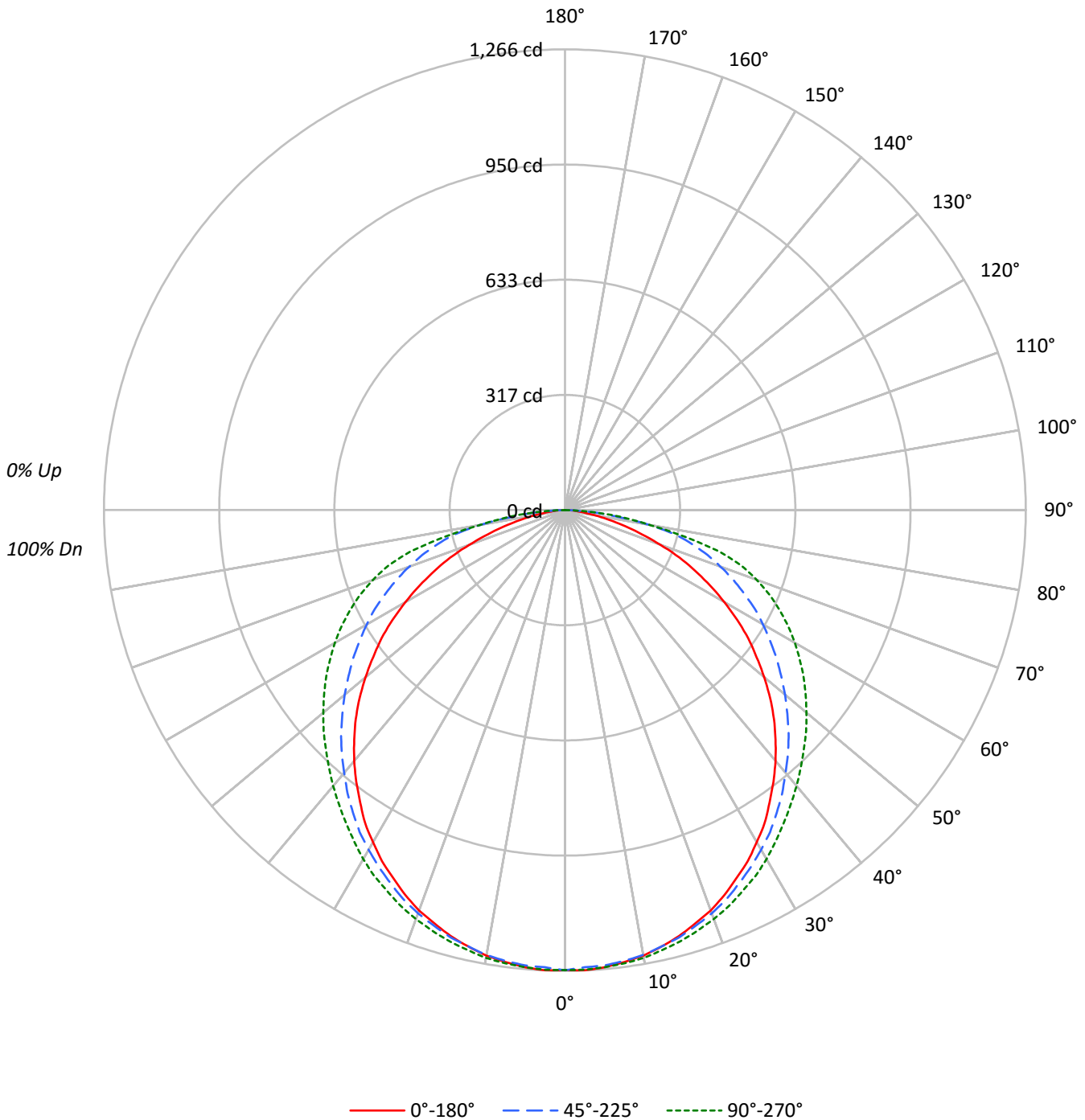
Input Watts (W): 43.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1701	1701	1701
5°	1703	1696	1703
10°	1698	1696	1707
15°	1688	1693	1708
20°	1677	1688	1712
25°	1656	1680	1714
30°	1637	1675	1721
35°	1610	1666	1723
40°	1581	1656	1739
45°	1546	1654	1766
50°	1495	1652	1813
55°	1442	1664	1879
60°	1361	1690	1962
65°	1257	1729	2072
70°	1097	1790	2207
75°	891	1882	2281
80°	657	1845	1845
85°	503	1360	1536



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.7	3.1
10°-20°	343.9	8.8
20°-30°	523.5	13.4
30°-40°	635.6	16.3
40°-50°	671.6	17.2
50°-60°	633.7	16.3
60°-70°	526.9	13.5
70°-80°	346.6	8.9
80°-90°	94.5	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°	987.1	25.3
0°-40°	1622.7	41.7
0°-60°	2928.0	75.2
0°-90°	3896.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3896.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1264	1264	1264	1264	1264	
5°	1261	1261	1256	1261	1261	120
15°	1212	1214	1215	1226	1226	342
25°	1116	1122	1132	1152	1155	515
35°	980	992	1014	1041	1049	614
45°	812	829	869	912	928	626
55°	615	641	710	776	801	548
65°	395	440	543	623	651	390
75°	171	250	362	429	439	185
85°	33	72	88	98	100	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1264.1	1264.1	1264.1	1264.1	1264.1
2.5°	1265.7	1264.1	1257.5	1264.1	1264.1
5°	1260.8	1260.8	1255.9	1260.8	1260.8
7.5°	1252.6	1252.6	1249.4	1255.9	1255.9
10°	1242.9	1242.9	1241.2	1249.4	1249.4
12.5°	1228.2	1229.8	1228.2	1238.0	1238.0
15°	1211.9	1213.5	1215.1	1226.5	1226.5
17.5°	1190.7	1193.9	1197.2	1210.2	1211.9
20°	1171.1	1172.7	1179.2	1193.9	1195.6
22.5°	1145.0	1149.9	1158.0	1172.7	1177.6
25°	1115.6	1122.2	1131.9	1151.5	1154.8
27.5°	1087.9	1092.8	1105.8	1127.1	1133.6
30°	1053.7	1061.8	1078.1	1099.3	1107.5
32.5°	1021.0	1029.2	1048.8	1071.6	1078.1
35°	980.3	991.7	1014.5	1040.6	1048.8
37.5°	941.1	952.5	980.3	1009.6	1019.4
40°	900.3	913.4	942.7	977.0	990.0
42.5°	856.3	874.2	906.9	944.4	959.1
45°	812.3	828.6	869.3	911.8	928.1
47.5°	765.0	784.5	828.6	879.1	898.7
50°	714.4	738.9	789.4	844.9	866.1
52.5°	663.8	691.6	748.6	810.6	833.5
55°	614.9	641.0	709.5	776.4	800.8
57.5°	561.1	593.7	668.7	740.5	765.0
60°	505.6	541.5	628.0	703.0	729.1
62.5°	450.2	490.9	588.8	663.8	691.6
65°	394.7	440.4	543.1	623.1	650.8
67.5°	340.9	391.5	500.7	580.7	608.4
70°	278.9	342.5	455.1	533.4	561.1
72.5°	221.8	295.2	411.0	484.4	508.9
75°	171.3	249.5	362.1	429.0	438.8
77.5°	125.6	203.9	311.5	334.4	336.0
80°	84.8	163.1	238.1	234.9	238.1
82.5°	55.5	122.3	150.1	168.0	169.6
85°	32.6	71.8	88.1	97.9	99.5
87.5°	16.3	24.5	31.0	32.6	35.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)