

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: P309598

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-HRP-CA08-W2A-U-6500K**

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: P309598
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-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 6500K 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: 4023.0 lumens
Efficiency: N/A
Efficacy: 89.4 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

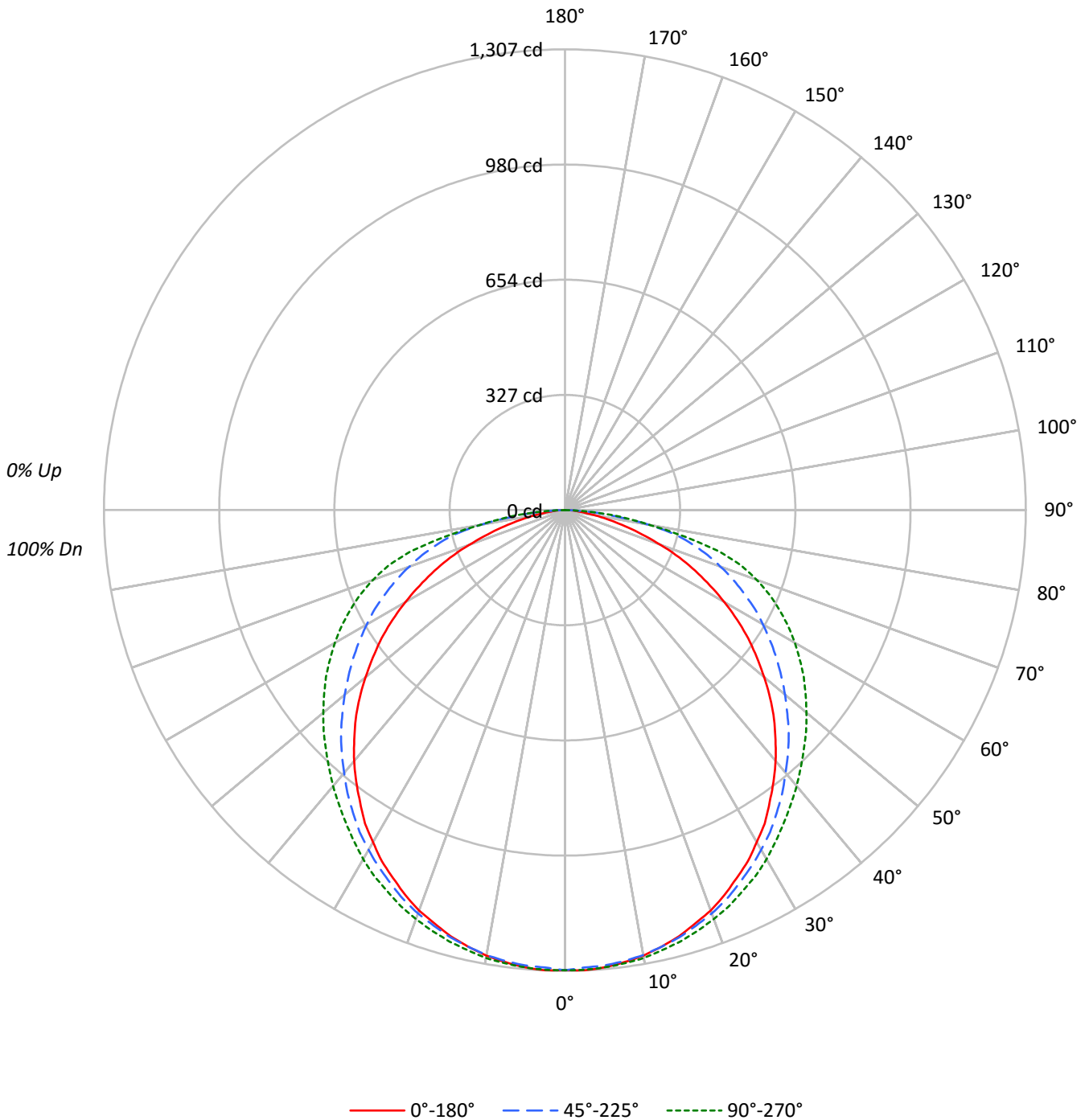
Input Watts (W): 45
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1756	1756	1756
5°	1758	1751	1758
10°	1753	1751	1763
15°	1743	1748	1764
20°	1732	1744	1768
25°	1710	1735	1770
30°	1690	1730	1777
35°	1663	1721	1779
40°	1633	1710	1796
45°	1596	1708	1823
50°	1544	1706	1872
55°	1489	1719	1940
60°	1405	1745	2026
65°	1298	1785	2139
70°	1133	1849	2279
75°	919	1944	2355
80°	679	1905	1905
85°	520	1403	1585



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.6	3.1
10°-20°	355.1	8.8
20°-30°	540.6	13.4
30°-40°	656.4	16.3
40°-50°	693.4	17.2
50°-60°	654.3	16.3
60°-70°	544.1	13.5
70°-80°	357.9	8.9
80°-90°	97.6	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°	1019.3	25.3
0°-40°	1675.6	41.7
0°-60°	3023.4	75.2
0°-90°	4023.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4023.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1305	1305	1305	1305	1305	
5°	1302	1302	1297	1302	1302	124
15°	1251	1253	1255	1266	1266	353
25°	1152	1159	1169	1189	1192	531
35°	1012	1024	1048	1074	1083	634
45°	839	856	898	942	958	646
55°	635	662	733	802	827	566
65°	408	455	561	643	672	403
75°	177	258	374	443	453	191
85°	34	74	91	101	103	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1305.3	1305.3	1305.3	1305.3	1305.3
2.5°	1306.9	1305.3	1298.5	1305.3	1305.3
5°	1301.9	1301.9	1296.8	1301.9	1301.9
7.5°	1293.5	1293.5	1290.1	1296.8	1296.8
10°	1283.4	1283.4	1281.7	1290.1	1290.1
12.5°	1268.2	1269.9	1268.2	1278.3	1278.3
15°	1251.4	1253.1	1254.7	1266.5	1266.5
17.5°	1229.5	1232.8	1236.2	1249.7	1251.4
20°	1209.3	1210.9	1217.7	1232.8	1234.5
22.5°	1182.3	1187.4	1195.8	1210.9	1216.0
25°	1152.0	1158.7	1168.8	1189.1	1192.4
27.5°	1123.4	1128.4	1141.9	1163.8	1170.5
30°	1088.0	1096.4	1113.3	1135.2	1143.6
32.5°	1054.3	1062.7	1082.9	1106.5	1113.3
35°	1012.2	1024.0	1047.6	1074.5	1082.9
37.5°	971.8	983.6	1012.2	1042.5	1052.6
40°	929.7	943.2	973.5	1008.8	1022.3
42.5°	884.2	902.7	936.4	975.2	990.3
45°	838.7	855.6	897.7	941.5	958.3
47.5°	789.9	810.1	855.6	907.8	928.0
50°	737.7	762.9	815.2	872.4	894.3
52.5°	685.5	714.1	773.1	837.1	860.6
55°	634.9	661.9	732.6	801.7	826.9
57.5°	579.4	613.1	690.5	764.6	789.9
60°	522.1	559.2	648.4	725.9	752.8
62.5°	464.8	506.9	608.0	685.5	714.1
65°	407.6	454.7	560.8	643.4	672.0
67.5°	352.0	404.2	517.1	599.6	628.2
70°	288.0	353.7	469.9	550.7	579.4
72.5°	229.1	304.8	424.4	500.2	525.5
75°	176.8	257.7	373.9	442.9	453.1
77.5°	129.7	210.5	321.7	345.3	346.9
80°	87.6	168.4	245.9	242.5	245.9
82.5°	57.3	126.3	154.9	173.5	175.2
85°	33.7	74.1	90.9	101.1	102.7
87.5°	16.8	25.3	32.0	33.7	37.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)