

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: P311731

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-S-CP125-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: P311731
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-65HE-UNV-L82765-S-CP125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB 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: 6413.0 lumens
Efficiency: N/A
Efficacy: 116.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

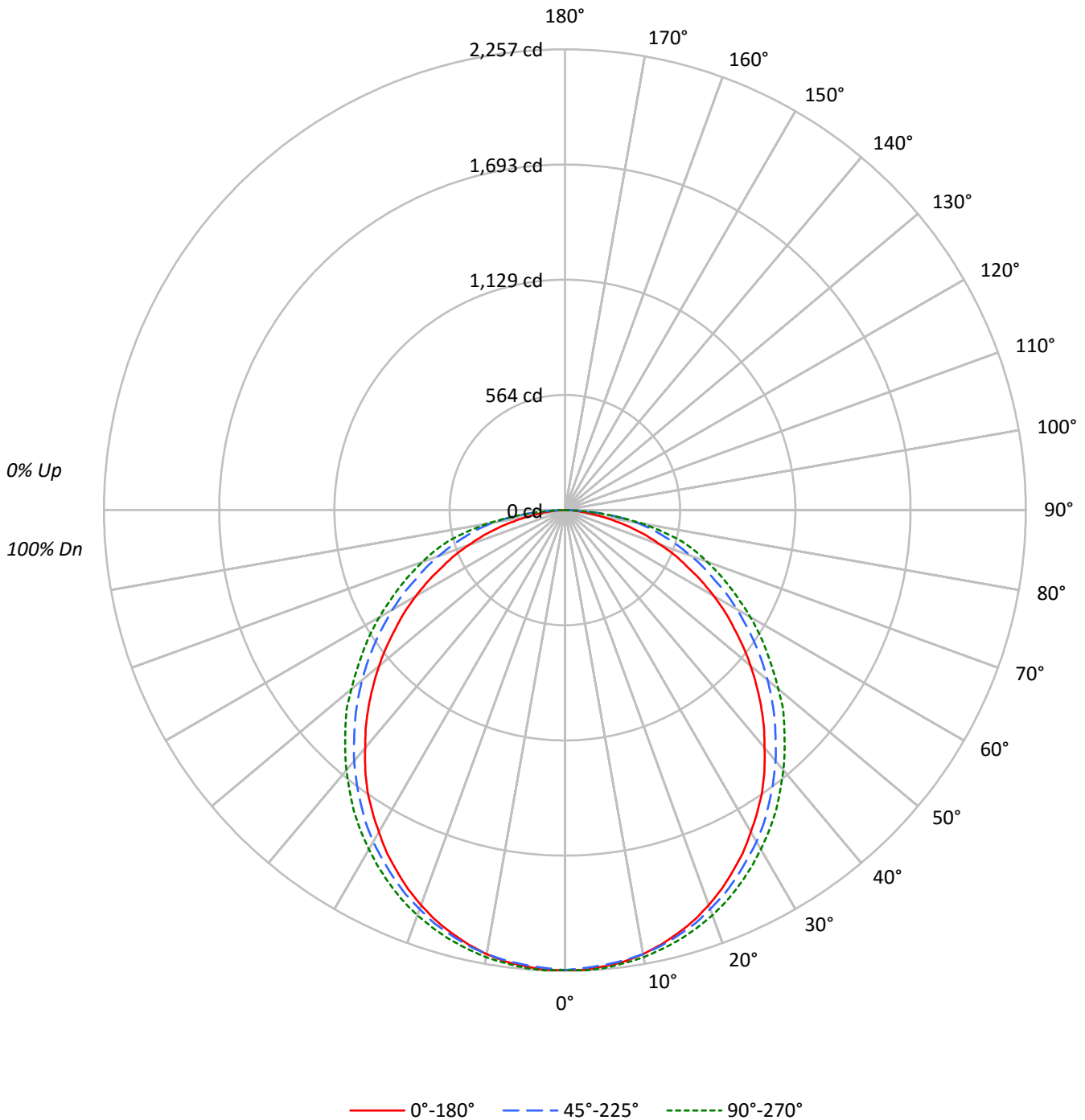
Input Watts (W): 54.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3031	3031	3031
5°	3029	3021	3040
10°	3017	3017	3039
15°	2988	3002	3033
20°	2949	2978	3025
25°	2894	2949	3006
30°	2829	2915	2981
35°	2767	2867	2958
40°	2673	2819	2923
45°	2585	2764	2892
50°	2486	2712	2857
55°	2375	2662	2829
60°	2264	2620	2823
65°	2121	2575	2840
70°	1963	2589	2917
75°	1758	2637	3082
80°	1420	2794	3015
85°	1070	2453	2390



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	213.3	3.3
10°-20°	609.4	9.5
20°-30°	916.1	14.3
30°-40°	1091.2	17.0
40°-50°	1116.8	17.4
50°-60°	1005.5	15.7
60°-70°	789.6	12.3
70°-80°	512.5	8.0
80°-90°	158.5	2.5
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°	1738.8	27.1
0°-40°	2830.1	44.1
0°-60°	4952.4	77.2
0°-90°	6413.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6413.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2253	2253	2253	2253	2253	
5°	2243	2247	2237	2249	2251	213
15°	2145	2151	2155	2174	2178	605
25°	1949	1966	1986	2019	2025	898
35°	1685	1705	1746	1788	1801	1051
45°	1359	1391	1452	1507	1520	1047
55°	1012	1057	1135	1194	1206	908
65°	666	717	809	876	892	663
75°	338	403	507	576	593	358
85°	69	128	159	155	155	84
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2252.9	2252.9	2252.9	2252.9	2252.9
2.5°	2255.0	2255.0	2244.8	2255.0	2257.0
5°	2242.7	2246.8	2236.6	2248.9	2250.9
7.5°	2230.5	2230.5	2224.4	2236.6	2238.7
10°	2208.1	2210.2	2208.1	2222.4	2224.4
12.5°	2179.6	2183.7	2185.7	2200.0	2202.0
15°	2145.0	2151.1	2155.2	2173.5	2177.6
17.5°	2106.3	2112.4	2122.6	2142.9	2147.0
20°	2059.4	2067.6	2079.8	2106.3	2112.4
22.5°	2008.5	2016.6	2037.0	2061.5	2071.6
25°	1949.4	1965.7	1986.1	2018.7	2024.8
27.5°	1890.3	1904.6	1931.1	1965.7	1973.9
30°	1821.1	1843.5	1876.1	1910.7	1918.9
32.5°	1753.9	1776.3	1815.0	1851.6	1861.8
35°	1684.6	1705.0	1745.7	1788.5	1800.7
37.5°	1605.2	1631.6	1676.5	1719.2	1731.5
40°	1521.6	1554.2	1605.2	1650.0	1664.2
42.5°	1442.2	1476.8	1527.8	1576.6	1592.9
45°	1358.7	1391.3	1452.4	1507.4	1519.6
47.5°	1273.1	1309.8	1375.0	1430.0	1450.3
50°	1187.6	1226.3	1295.5	1352.6	1364.8
52.5°	1102.0	1142.8	1216.1	1277.2	1283.3
55°	1012.4	1057.2	1134.6	1193.7	1205.9
57.5°	930.9	969.6	1053.1	1114.2	1128.5
60°	841.3	884.1	973.7	1030.7	1049.1
62.5°	755.7	800.5	894.2	951.3	967.6
65°	666.1	717.0	808.7	875.9	892.2
67.5°	588.7	637.6	735.4	800.5	816.8
70°	499.1	554.1	658.0	725.2	741.5
72.5°	421.7	478.7	582.6	647.8	672.2
75°	338.1	403.3	507.2	576.5	592.8
77.5°	256.7	332.0	438.0	490.9	490.9
80°	183.3	262.8	360.6	385.0	389.1
82.5°	120.2	197.6	266.8	264.8	264.8
85°	69.3	128.3	158.9	154.8	154.8
87.5°	26.5	53.0	57.0	57.0	55.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)