

Scaled data based on original data using  
LM-46-04 Photometric Testing of Indoor Luminaires Using High Intensity Discharge or  
Incandescent Filament Lamps (Reaffirmed 2012)

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P#

Luminaire Tested: **24CZ-LD5-65SE-SQP-UNV-L835-CD1-U**

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-46-04  
Report Number: P#  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25713)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ-LD5-65SE-SQP-UNV-L835-CD1-U  
Description:

Light Source: -  
Ballast/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**

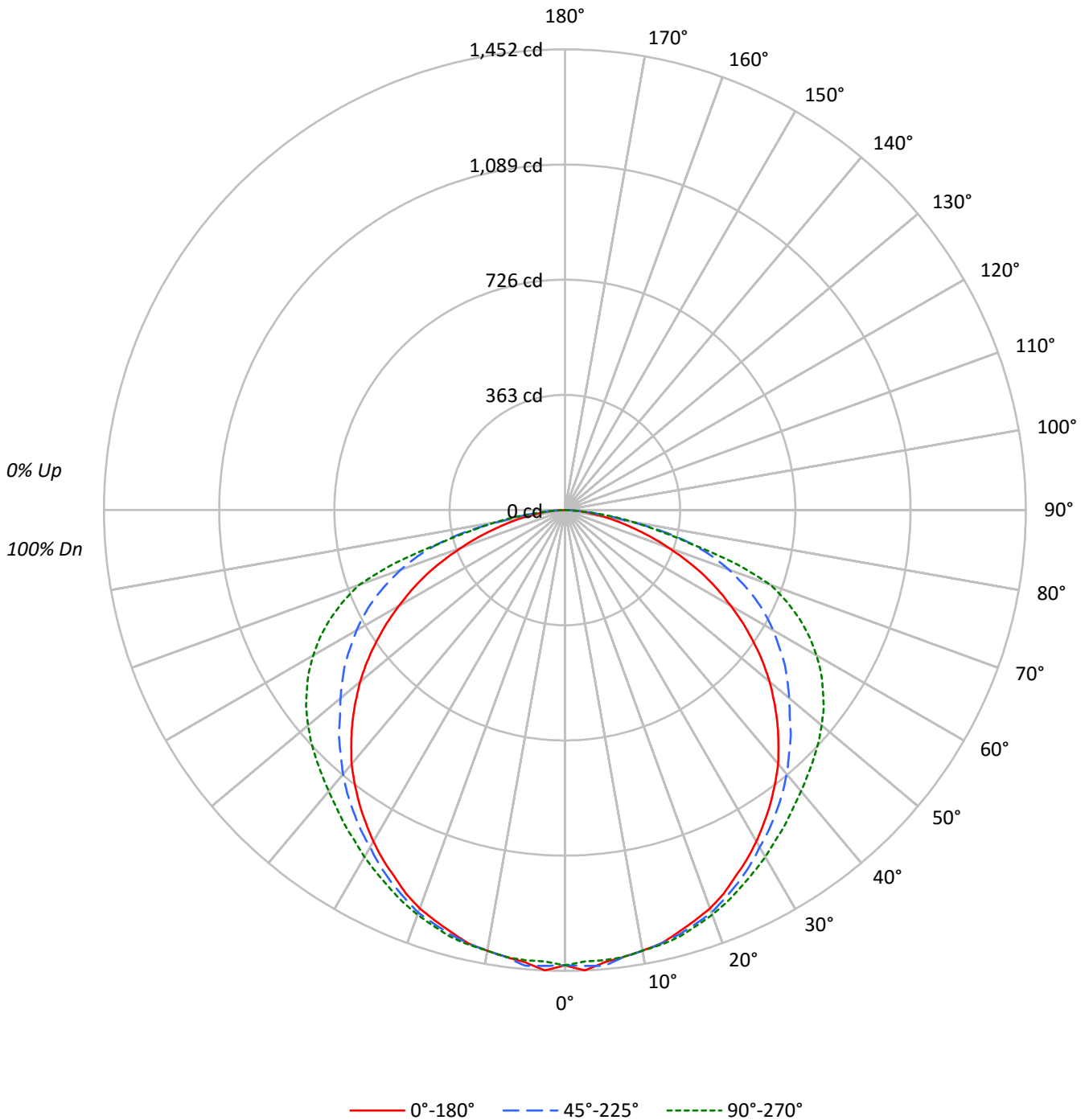
Lumens per Lamp: N/A  
Luminaire Lumens: 4515.8 lumens  
Efficiency: N/A  
Efficacy: 75.3 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.31 / 1.41  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 4' x H: 0.1')  
CIE Type: Direct

Input Watts (W): 60  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68
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	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	68	55	45	39	66	54	45	39	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	29	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	51	38	30	24	50	37	30	24	36	29	24	35	29	24	35	28	24	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1930	1930	1930
5°	1928	1938	1915
10°	1918	1908	1909
15°	1907	1903	1914
20°	1896	1897	1909
25°	1868	1875	1903
30°	1848	1850	1906
35°	1823	1838	1920
40°	1798	1828	1951
45°	1758	1819	2008
50°	1711	1816	2085
55°	1644	1843	2173
60°	1556	1867	2267
65°	1452	1895	2349
70°	1278	1891	2390
75°	1084	1811	1813
80°	881	1232	1355
85°	674	674	620



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	136.2	3.0
10°-20°	391.1	8.7
20°-30°	596.0	13.2
30°-40°	729.3	16.1
40°-50°	784.7	17.4
50°-60°	760.1	16.8
60°-70°	643.9	14.3
70°-80°	389.2	8.6
80°-90°	85.5	1.9
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°	1123.3	24.9
0°-40°	1852.6	41.0
0°-60°	3397.3	75.2
0°-90°	4515.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4515.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1434	1434	1434	1434	1434	
5°	1431	1431	1441	1434	1424	136
15°	1378	1382	1385	1389	1392	389
25°	1273	1280	1294	1305	1312	588
35°	1129	1136	1161	1192	1210	706
45°	947	964	1006	1070	1108	730
55°	726	758	845	943	992	648
65°	480	533	663	768	817	473
75°	228	309	417	424	414	245
85°	56	67	70	67	63	63
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1434.4	1434.4	1434.4	1434.4	1434.4
2.5°	1451.9	1448.4	1437.9	1430.9	1423.8
5°	1430.9	1430.9	1441.4	1434.4	1423.8
7.5°	1420.3	1420.3	1420.3	1437.9	1420.3
10°	1409.8	1413.3	1409.8	1423.8	1409.8
12.5°	1399.3	1399.3	1399.3	1402.8	1402.8
15°	1378.2	1381.8	1385.3	1388.8	1392.3
17.5°	1357.2	1360.7	1367.7	1371.2	1374.7
20°	1336.2	1339.7	1350.2	1350.2	1357.2
22.5°	1308.1	1308.1	1322.1	1325.6	1336.2
25°	1273.0	1280.1	1294.1	1304.6	1311.6
27.5°	1241.5	1248.5	1262.5	1276.5	1287.1
30°	1206.4	1213.4	1227.4	1248.5	1262.5
32.5°	1167.8	1174.8	1195.9	1220.4	1234.5
35°	1129.3	1136.3	1160.8	1192.4	1209.9
37.5°	1087.2	1097.7	1125.7	1160.8	1181.9
40°	1045.1	1055.6	1087.2	1125.7	1157.3
42.5°	996.0	1010.0	1045.1	1097.7	1132.8
45°	946.9	964.4	1006.5	1069.6	1108.2
47.5°	894.3	911.8	960.9	1041.6	1083.7
50°	841.7	862.7	922.3	1010.0	1055.6
52.5°	785.6	806.6	883.8	978.5	1027.5
55°	725.9	757.5	845.2	943.4	992.5
57.5°	666.3	701.4	799.6	904.8	957.4
60°	603.2	645.3	757.5	862.7	915.3
62.5°	543.6	589.2	711.9	817.1	869.7
65°	480.5	533.1	662.8	768.0	817.1
67.5°	413.8	480.5	606.7	708.4	757.5
70°	347.2	424.3	550.6	645.3	690.9
72.5°	287.6	368.2	487.5	568.1	568.1
75°	228.0	308.6	417.3	424.3	413.8
77.5°	175.3	252.5	326.2	298.1	305.1
80°	129.8	192.9	206.9	217.4	224.4
82.5°	87.7	129.8	133.3	140.3	140.3
85°	56.1	66.6	70.1	66.6	63.1
87.5°	24.5	28.1	21.0	14.0	10.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)