

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: NEO-RAY

Report Number: P33924

Luminaire Tested: **S124DW-235-0048-1D-UDD-1-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P33924  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DW-235-0048-1D-UDD-1-W  
Description: NEORAY DIRECT- INDIRECT 4" FIXTURE WITH A FLUSH DIFFUSE  
LENS.LL2  
Light Source: [117] NICHIA 3500K LED  
Nichia 757D  
Ballast/Driver: [1] OSRAM SYLVANIA ELECTRONIC DRIVER  
OT48WPRG2000C

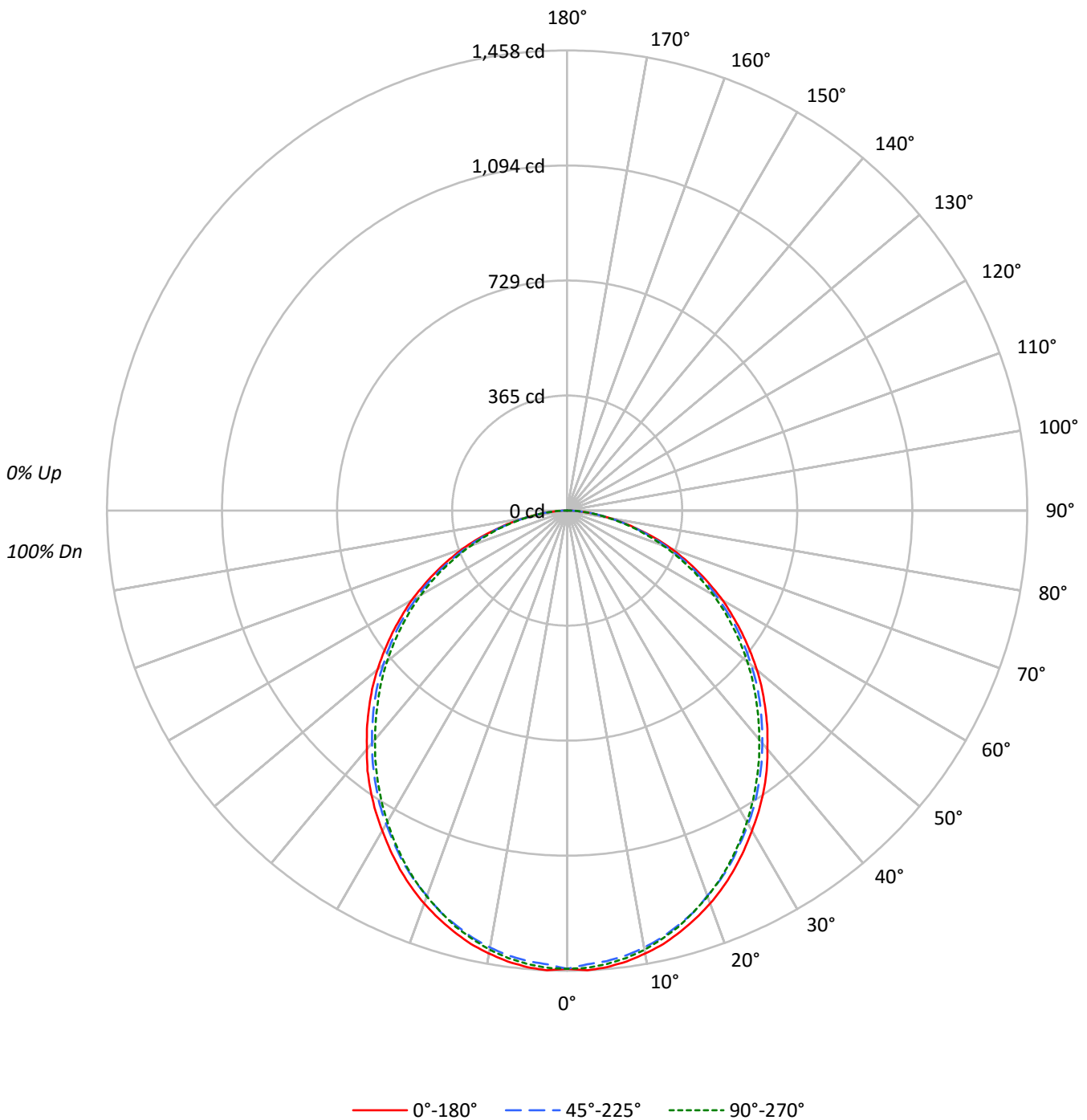
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3764.6 lumens  
Efficiency: N/A  
Efficacy: 87.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.2  
Input Voltage (V): 120.02  
Input Current (A<sub>in</sub>): 3612  
Voltage Rise (V): NR  
Power Factor: 0.9989  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: HR  
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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	60	53	47	59	52	47	57	51	46	44
6	71	57	49	42	69	57	48	42	55	47	42	53	46	41	51	46	41	39
7	66	52	44	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

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

	0°	45°	90°
0°	11722	11722	11722
5°	11767	11613	11686
10°	11681	11526	11583
15°	11550	11367	11408
20°	11383	11160	11177
25°	11170	10956	10912
30°	10916	10692	10618
35°	10693	10427	10309
40°	10401	10138	9980
45°	10138	9864	9670
50°	9859	9558	9357
55°	9515	9261	9008
60°	9187	8880	8638
65°	8749	8443	8195
70°	8261	7907	7624
75°	7424	7205	7018
80°	6369	6369	6183
85°	5280	5280	5187



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	136.8	3.6
10°-20°	385.9	10.3
20°-30°	569.2	15.1
30°-40°	664.6	17.7
40°-50°	668.8	17.8
50°-60°	588.6	15.6
60°-70°	438.8	11.7
70°-80°	245.1	6.5
80°-90°	66.7	1.8
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°	1092.0	29.0
0°-40°	1756.6	46.7
0°-60°	3014.0	80.1
0°-90°	3764.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3764.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1452	1452	1452	1452	1452	
5°	1452	1447	1433	1445	1442	138
15°	1382	1377	1360	1368	1365	390
25°	1254	1245	1230	1231	1225	577
35°	1085	1076	1058	1052	1046	678
45°	888	882	864	854	847	685
55°	676	673	658	645	640	605
65°	458	455	442	434	429	453
75°	238	235	231	225	225	254
85°	57	56	57	57	56	67
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1452	1452	1452	1452	1452
2.5°	1458	1453	1439	1451	1450
5°	1452	1447	1433	1445	1442
7.5°	1441	1435	1422	1432	1430
10°	1425	1420	1406	1415	1413
12.5°	1407	1401	1386	1395	1390
15°	1382	1377	1360	1368	1365
17.5°	1355	1349	1334	1337	1333
20°	1325	1318	1299	1306	1301
22.5°	1291	1285	1267	1269	1265
25°	1254	1245	1230	1231	1225
27.5°	1213	1207	1188	1188	1183
30°	1171	1164	1147	1145	1139
32.5°	1130	1122	1105	1098	1094
35°	1085	1076	1058	1052	1046
37.5°	1039	1029	1011	1002	998
40°	987	980	962	954	947
42.5°	939	932	913	906	897
45°	888	882	864	854	847
47.5°	838	830	814	803	797
50°	785	779	761	751	745
52.5°	730	724	710	700	693
55°	676	673	658	645	640
57.5°	621	618	604	593	588
60°	569	563	550	541	535
62.5°	512	508	498	487	482
65°	458	455	442	434	429
67.5°	403	399	387	381	376
70°	350	344	335	328	323
72.5°	295	287	282	276	273
75°	238	235	231	225	225
77.5°	187	183	182	177	176
80°	137	137	137	134	133
82.5°	95	92	95	95	94
85°	57	56	57	57	56
87.5°	26	26	26	27	28
90°	0	0	0	0	0

(END OF REPORT)