

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1033228

Luminaire Tested: S124DIW-B1020D770UB40-4F0-XX-W2A-F

Issue Date: 5/6/2025

Test Information

Test Method: LM-79-2019
Report Number: P1033228
REPORT IS A COMBINATION OF REPORTS P996937 AND P1007351
Test Lab: INNOVATION CENTER
Issue Date: 5/6/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DIW-B1020D770UB40-4F0-XX-W2A-F
Description: Define 4 Direct/Indirect Wall Mount with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}
Light Source: -
Ballast/Driver: -

Summary

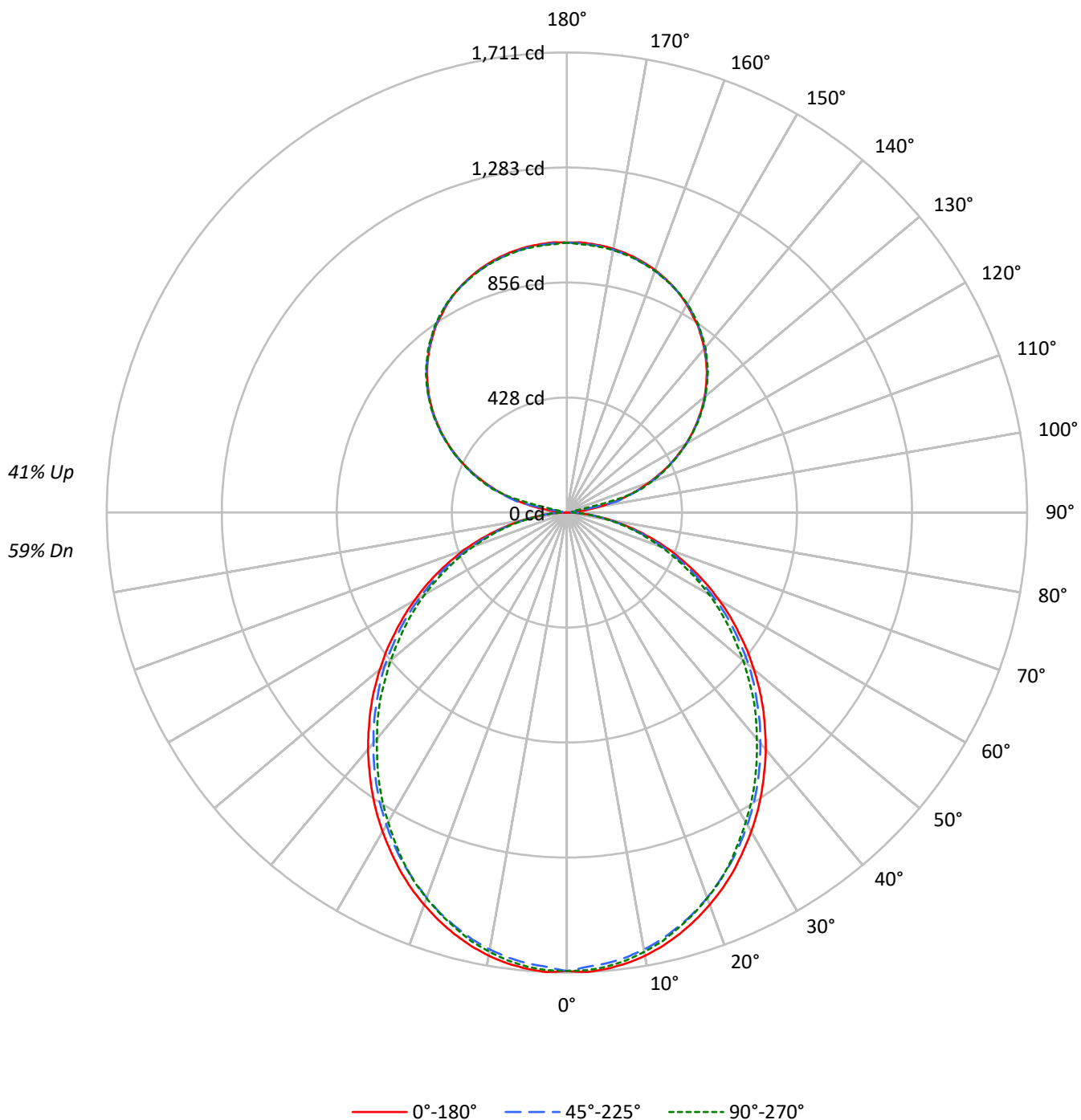
Lumens per Lamp: N/A
Luminaire Lumens: 7485.0 lumens
Efficiency: N/A
Efficacy: 106.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 70
Input Voltage (V):
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: 24 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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	109	109	109	109	102	102	102	102	88	88	88	75	75	75	64	64	64
1	100	95	91	88	93	89	86	82	77	75	72	66	65	63	56	55	54
2	91	83	77	72	84	78	72	68	68	63	60	58	55	52	50	47	45
3	83	73	66	60	77	68	62	57	60	55	50	52	48	44	44	41	39
4	76	65	57	51	70	61	54	48	53	47	43	46	42	38	39	36	33
5	70	58	49	43	65	54	47	41	48	42	37	41	37	33	35	32	29
6	64	52	44	38	60	49	41	36	43	37	32	37	33	29	32	28	26
7	59	47	39	33	55	44	37	32	39	33	29	34	29	26	29	26	23
8	55	43	35	29	51	40	33	28	36	30	25	31	26	23	27	23	20
9	51	39	31	26	48	37	30	25	33	27	23	29	24	21	25	21	18
10	48	36	28	24	45	34	27	23	30	24	21	27	22	19	23	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13906	13906	13906
5°	13917	13506	13522
10°	13800	13130	13039
15°	13602	12685	12494
20°	13349	12203	11929
25°	13064	11693	11321
30°	12721	11142	10654
35°	12365	10579	10010
40°	11995	9972	9324
45°	11608	9363	8683
50°	11177	8773	7973
55°	10710	8084	7267
60°	10231	7329	6533
65°	9684	6550	5705
70°	9053	5611	4818
75°	8112	4522	3859
80°	6914	3269	2714
85°	5370	1822	1461

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 11608 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.7	2.1
10°-20°	452.8	6.0
20°-30°	666.4	8.9
30°-40°	774.7	10.4
40°-50°	774.6	10.3
50°-60°	677.5	9.1
60°-70°	503.0	6.7
70°-80°	285.4	3.8
80°-90°	83.8	1.1
90°-100°	33.3	0.4
100°-110°	219.4	2.9
110°-120°	419.0	5.6
120°-130°	531.9	7.1
130°-140°	569.0	7.6
140°-150°	532.1	7.1
150°-160°	429.1	5.7
160°-170°	276.7	3.7
170°-180°	95.4	1.3
0°-30°	1280.0	17.1
0°-40°	2054.7	27.5
0°-60°	3506.8	46.9
0°-90°	4379.1	58.5
90°-120°	671.8	9.0
90°-150°	2304.8	30.8
90°-180°	3106.0	41.5
0°-180°	7485.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1705	1705	1705	1705	1705	
5°	1704	1698	1683	1698	1696	162
15°	1622	1616	1596	1604	1600	457
25°	1469	1459	1440	1442	1436	676
35°	1264	1254	1235	1226	1219	790
45°	1032	1022	1000	985	981	795
55°	780	776	757	741	732	699
65°	529	522	508	495	488	523
75°	282	275	268	262	261	299
85°	74	74	71	71	70	79
90°	2	10	16	21	22	7
95°	41	16	16	21	22	51
105°	226	230	234	241	214	237
115°	422	424	423	425	425	415
125°	593	596	595	597	598	530
135°	736	735	738	740	741	567
145°	848	851	851	851	853	530
155°	930	931	929	932	929	429
165°	981	978	978	984	977	277
175°	1004	999	1000	1007	998	96
180°	1004	1004	1004	1004	1004	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1705.3	1705.3	1705.3	1705.3	1705.3
2.5°	1710.8	1706.7	1691.6	1705.3	1703.9
5°	1703.9	1698.5	1683.4	1698.5	1695.7
7.5°	1691.6	1686.2	1669.8	1682.1	1680.7
10°	1673.9	1668.4	1650.6	1661.6	1658.8
12.5°	1650.6	1645.2	1626.1	1638.4	1634.3
15°	1622.0	1616.5	1596.0	1604.2	1600.1
17.5°	1589.2	1582.3	1563.2	1568.7	1565.9
20°	1552.3	1545.4	1524.9	1529.0	1526.3
22.5°	1512.6	1503.1	1482.6	1490.8	1485.3
25°	1468.9	1459.3	1440.2	1441.6	1436.1
27.5°	1419.7	1410.2	1392.4	1389.7	1382.8
30°	1370.5	1359.6	1341.8	1336.4	1329.5
32.5°	1318.6	1309.0	1289.9	1283.1	1276.2
35°	1263.9	1254.4	1235.3	1225.7	1218.9
37.5°	1206.6	1198.4	1177.9	1168.3	1158.7
40°	1150.5	1139.6	1119.1	1105.4	1098.6
42.5°	1090.4	1084.9	1061.7	1045.3	1041.2
45°	1031.7	1022.1	1000.2	985.2	981.1
47.5°	970.2	963.3	942.8	926.4	915.5
50°	907.3	901.8	882.7	863.6	855.4
52.5°	845.8	839.0	818.5	802.1	791.2
55°	780.2	776.1	757.0	740.6	732.4
57.5°	718.7	714.6	695.5	679.1	670.9
60°	654.5	647.7	629.9	617.6	610.8
62.5°	591.7	586.2	567.1	556.1	549.3
65°	528.8	522.0	508.3	494.6	487.8
67.5°	464.6	459.1	445.5	431.8	430.4
70°	405.8	396.3	385.3	374.4	370.3
72.5°	343.0	333.4	325.2	317.0	312.9
75°	281.5	274.7	267.8	262.4	261.0
77.5°	221.4	218.6	211.8	210.4	206.3
80°	168.1	164.0	161.2	158.5	157.1
82.5°	116.1	114.8	114.8	113.4	112.0
85°	73.8	73.8	71.1	71.1	69.7
87.5°	35.5	34.2	32.8	32.8	32.8
90°	2.3	10.5	16.5	21.0	22.5
92.5°	11.3	9.8	15.8	20.3	20.3
95°	41.3	15.8	16.5	21.0	21.8
97.5°	78.8	95.3	16.5	20.3	21.0
100°	123.1	136.6	33.0	20.3	21.0
102.5°	172.7	181.7	190.7	21.8	21.8
105°	226.0	230.5	234.2	241.0	214.0
107.5°	274.8	277.0	282.3	286.0	289.0
110°	324.3	326.6	331.1	332.6	334.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	372.4	376.9	378.4	377.6	380.6
115°	421.9	424.2	423.4	424.9	424.9
117.5°	466.2	469.2	471.5	470.7	470.7
120°	511.3	514.3	513.5	515.0	513.5
122.5°	553.3	554.8	556.3	557.0	555.5
125°	593.1	596.1	594.6	596.8	597.6
127.5°	631.4	632.1	635.9	635.1	634.4
130°	668.2	668.9	671.2	671.9	671.9
132.5°	701.9	703.4	706.4	707.2	706.4
135°	735.7	735.0	738.0	739.5	741.0
137.5°	765.8	765.8	769.5	771.0	770.3
140°	795.0	796.5	798.0	800.3	801.0
142.5°	821.3	824.3	825.1	826.6	826.6
145°	848.3	850.6	850.6	851.3	852.8
147.5°	869.4	873.9	873.1	873.9	874.6
150°	892.6	895.6	894.9	894.9	895.6
152.5°	912.2	914.4	912.9	914.4	913.7
155°	930.2	930.9	928.7	931.7	929.4
157.5°	945.9	945.9	942.9	946.7	942.9
160°	959.4	957.2	956.4	960.9	956.4
162.5°	971.5	968.5	967.7	972.2	967.0
165°	981.2	977.5	977.5	983.5	976.7
167.5°	989.5	985.7	985.0	991.7	984.2
170°	996.2	991.7	992.5	998.5	991.0
172.5°	1000.7	996.2	997.0	1003.0	994.7
175°	1003.7	999.2	1000.0	1006.7	997.7
177.5°	1006.0	1000.7	1002.2	1008.2	999.2
180°	1003.7	1003.7	1003.7	1003.7	1003.7

(END OF REPORT)