

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: P998429

Luminaire Tested: S124DR-B1020DB2750-4F0-XX-W2A-D_3500K

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P998429
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-16)
Test Lab: INNOVATION CENTER
Issue Date: 5/2/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DR-B1020DB2750-4F0-XX-W2A-D_3500K
Description: Define 4 Direct Recessed with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}
Light Source: -
Ballast/Driver: -

Summary

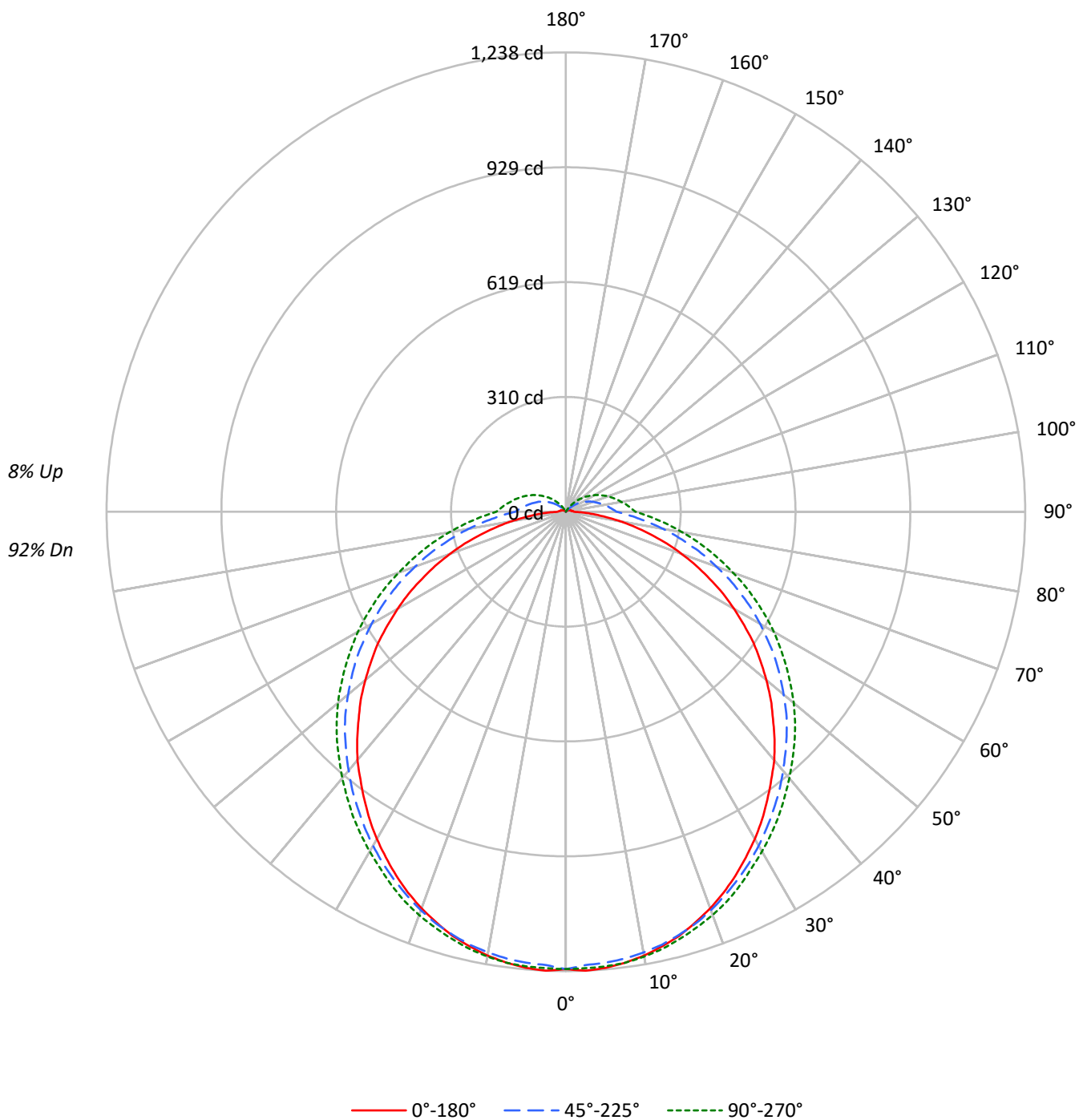
Lumens per Lamp: N/A
Luminaire Lumens: 4202.0 lumens
Efficiency: N/A
Efficacy: 89.8 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	95	95	92
1	105	100	95	91	102	97	93	89	91	88	84	86	83	80	81	79	77	77	77	74
2	95	86	79	73	92	84	77	71	79	73	68	74	70	66	70	67	63	63	63	60
3	87	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	53	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	49	45	45	45	43
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39	39	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	45	39	34	34	34	32
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30	30	30	28
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27	27	27	25
9	54	40	32	26	52	39	31	26	38	30	25	36	29	25	34	29	24	24	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	23	32	26	22	22	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10050	10050	10050
5°	10100	9986	10066
10°	10056	9988	10080
15°	9985	9962	10055
20°	9868	9917	10037
25°	9735	9848	9996
30°	9590	9786	9955
35°	9425	9727	9961
40°	9299	9696	9975
45°	9104	9709	10060
50°	8948	9718	10173
55°	8790	9791	10302
60°	8531	9859	10557
65°	8254	10012	10892
70°	7930	10300	11418
75°	7480	10914	12524
80°	7063	12510	14971
85°	6839	18076	23241

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 40250 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.8	2.8
10°-20°	334.6	8.0
20°-30°	505.9	12.0
30°-40°	612.0	14.6
40°-50°	647.0	15.4
50°-60°	608.9	14.5
60°-70°	505.3	12.0
70°-80°	354.6	8.4
80°-90°	199.9	4.8
90°-100°	119.0	2.8
100°-110°	88.1	2.1
110°-120°	59.2	1.4
120°-130°	33.3	0.8
130°-140°	14.4	0.3
140°-150°	2.9	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	957.3	22.8
0°-40°	1569.3	37.3
0°-60°	2825.3	67.2
0°-90°	3885.1	92.5
90°-120°	266.3	6.3
90°-150°	316.9	7.5
90°-180°	317.0	7.5
0°-180°	4202.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1232	1232	1232	1232	1232	
5°	1234	1230	1220	1231	1230	117
15°	1183	1184	1180	1192	1191	333
25°	1082	1090	1094	1110	1111	498
35°	947	963	977	996	1001	593
45°	789	816	842	865	872	610
55°	618	647	689	716	725	551
65°	428	472	519	553	564	424
75°	237	288	346	385	398	252
85°	73	131	193	235	248	76
90°	22	77	137	177	188	15
95°	18	64	120	157	170	14
105°	12	40	91	126	137	14
115°	8	21	65	95	105	9
125°	6	4	39	65	73	5
135°	3	3	12	34	43	3
145°	1	0	0	8	14	1
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1232.5	1232.5	1232.5	1232.5	1232.5
2.5°	1238.0	1233.9	1222.8	1232.5	1231.1
5°	1233.9	1229.7	1220.0	1231.1	1229.7
7.5°	1225.6	1222.8	1214.5	1227.0	1225.6
10°	1214.5	1213.1	1206.2	1218.7	1217.3
12.5°	1199.3	1199.3	1195.2	1206.2	1206.2
15°	1182.8	1184.2	1180.0	1192.4	1191.1
17.5°	1160.7	1164.8	1163.5	1175.9	1174.5
20°	1137.2	1141.4	1142.8	1156.6	1156.6
22.5°	1111.0	1116.5	1119.3	1133.1	1135.9
25°	1082.0	1090.3	1094.5	1109.6	1111.0
27.5°	1050.3	1062.7	1068.2	1082.0	1083.4
30°	1018.5	1029.6	1039.3	1054.4	1057.2
32.5°	984.0	997.8	1008.9	1026.8	1029.6
35°	946.8	963.3	977.1	996.5	1000.6
37.5°	909.5	928.8	945.4	964.7	968.9
40°	873.6	891.6	910.9	931.6	937.1
42.5°	832.2	852.9	876.4	899.9	904.0
45°	789.4	815.7	841.9	865.4	872.3
47.5°	749.4	775.6	806.0	829.5	837.7
50°	705.3	735.6	766.0	793.6	801.9
52.5°	661.1	691.5	727.3	754.9	763.2
55°	618.3	647.3	688.7	716.3	724.6
57.5°	570.0	605.9	645.9	679.0	685.9
60°	523.1	559.0	604.5	636.2	647.3
62.5°	477.5	517.6	563.1	594.8	605.9
65°	427.8	472.0	518.9	553.4	564.5
67.5°	380.9	427.8	477.5	512.0	523.1
70°	332.6	379.5	432.0	469.2	478.9
72.5°	285.7	334.0	390.6	426.5	437.5
75°	237.4	288.5	346.4	385.1	397.5
77.5°	191.8	245.7	306.4	345.0	358.8
80°	150.4	205.6	266.4	307.8	318.8
82.5°	109.0	167.0	227.7	270.5	282.9
85°	73.1	131.1	193.2	234.6	248.4
87.5°	45.5	102.1	162.9	202.9	215.3
90°	22.1	77.3	136.6	176.7	187.7
92.5°	20.7	69.0	128.4	167.0	178.0
95°	17.9	63.5	120.1	157.3	169.8
97.5°	16.6	56.6	113.2	149.1	161.5
100°	15.2	51.1	104.9	142.2	151.8
102.5°	15.2	45.5	98.0	133.9	144.9
105°	12.4	40.0	91.1	125.6	136.6
107.5°	12.4	35.9	84.2	118.7	128.4
110°	11.0	30.4	78.7	110.4	121.5

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	9.7	26.2	71.8	102.1	113.2
115°	8.3	20.7	64.9	95.2	104.9
117.5°	8.3	16.6	58.0	86.9	98.0
120°	6.9	11.0	51.1	78.7	89.7
122.5°	6.9	6.9	44.2	71.8	81.4
125°	5.5	4.1	38.6	64.9	73.1
127.5°	5.5	4.1	31.7	56.6	66.2
130°	4.1	2.8	24.8	49.7	58.0
132.5°	4.1	2.8	19.3	42.8	51.1
135°	2.8	2.8	12.4	34.5	42.8
137.5°	2.8	1.4	6.9	27.6	34.5
140°	2.8	1.4	2.8	20.7	27.6
142.5°	1.4	1.4	0.0	15.2	20.7
145°	1.4	0.0	0.0	8.3	13.8
147.5°	1.4	0.0	0.0	1.4	6.9
150°	1.4	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)