

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055977

Luminaire Tested: S124R3DR-S1020D950-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055977
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-8)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-S1020D950-X4F0-XX-UDD-F-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

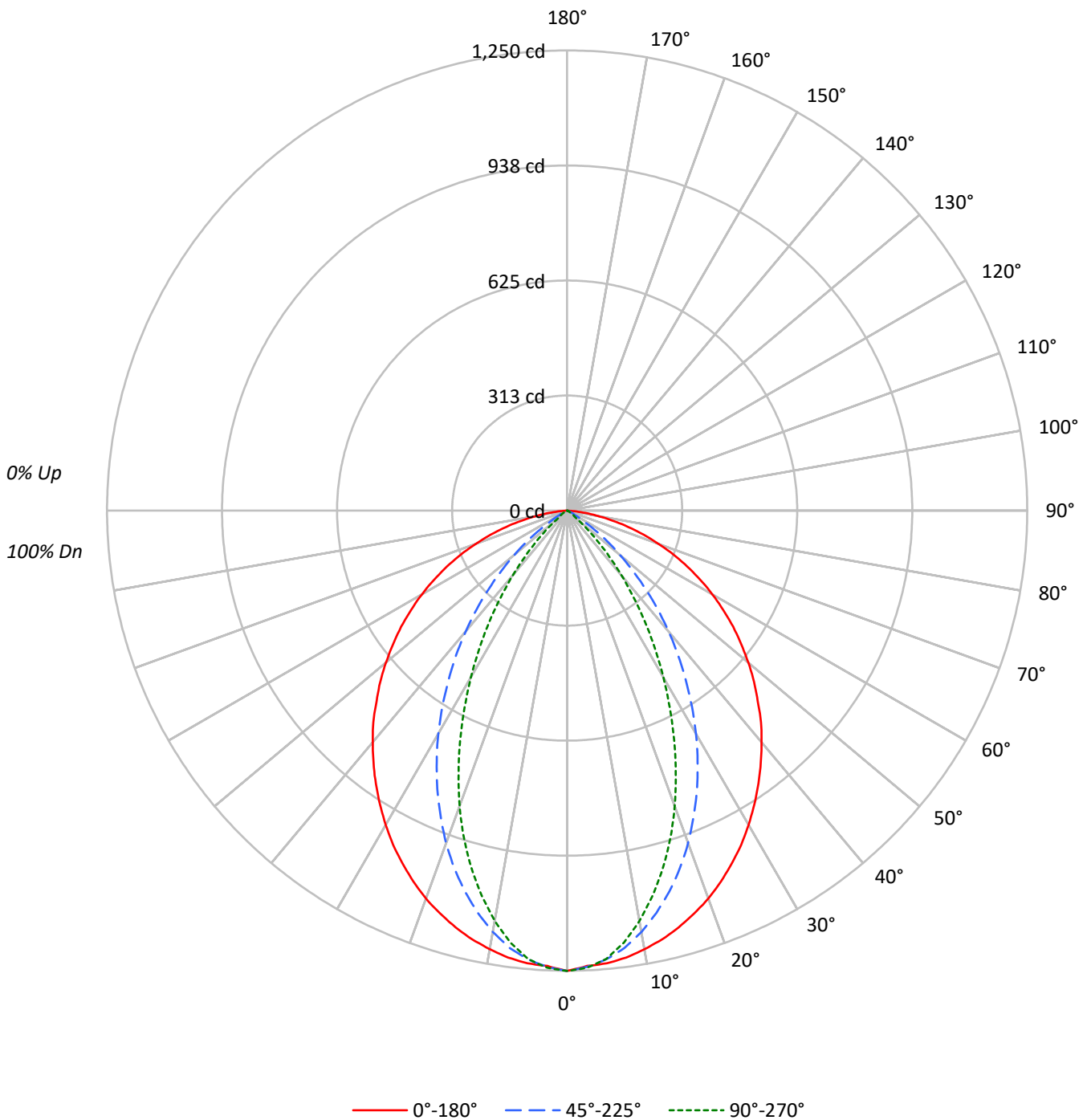
Lumens per Lamp: N/A
Luminaire Lumens: 1747.7 lumens
Efficiency: N/A
Efficacy: 50.4 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
Input Voltage (V): 120
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64
5	84	74	66	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54	52
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40
10	62	50	43	39	61	50	43	39	49	43	39	48	42	39	47	42	38	37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11056	11056	11056
5°	10956	10859	10848
10°	10863	10434	10159
15°	10728	9808	9202
20°	10554	9043	8040
25°	10321	8145	6710
30°	10063	7146	5332
35°	9779	6060	3970
40°	9480	4939	2646
45°	9151	3771	1457
50°	8836	2580	404
55°	8486	1398	265
60°	8065	433	152
65°	7540	282	77
70°	6814	127	31
75°	5862	41	0
80°	4430	0	0
85°	1867	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9151 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.4	6.6
10°-20°	302.9	17.3
20°-30°	391.3	22.4
30°-40°	374.0	21.4
40°-50°	279.7	16.0
50°-60°	166.5	9.5
60°-70°	84.5	4.8
70°-80°	29.4	1.7
80°-90°	4.0	0.2
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°	809.6	46.3
0°-40°	1183.6	67.7
0°-60°	1629.8	93.3
0°-90°	1747.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1747.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1250	1250	1250	1250	1250	
5°	1234	1244	1224	1217	1222	117
15°	1172	1148	1072	1021	1005	330
25°	1058	984	835	724	688	487
35°	906	781	562	418	368	567
45°	732	562	302	161	116	566
55°	550	342	91	21	17	491
65°	360	138	14	5	4	356
75°	172	18	1	1	0	182
85°	18	0	0	0	0	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1250.5	1250.5	1250.5	1250.5	1250.5
2.5°	1238.2	1252.9	1240.7	1241.9	1243.1
5°	1234.5	1244.3	1223.5	1217.4	1222.3
7.5°	1224.7	1228.4	1197.8	1181.8	1183.0
10°	1210.0	1206.3	1162.2	1135.2	1131.6
12.5°	1192.9	1180.6	1119.3	1080.1	1071.5
15°	1172.0	1147.5	1071.5	1021.2	1005.3
17.5°	1147.5	1111.9	1018.8	952.6	932.9
20°	1121.7	1072.7	961.1	879.0	854.5
22.5°	1091.1	1028.6	898.6	801.8	771.1
25°	1058.0	984.4	834.9	724.5	687.8
27.5°	1023.7	936.6	767.4	646.1	603.2
30°	985.7	886.4	700.0	566.4	522.3
32.5°	946.4	834.9	630.1	492.8	443.8
35°	906.0	780.9	561.5	418.0	367.8
37.5°	864.3	727.0	495.3	346.9	295.5
40°	821.4	671.8	427.9	279.5	229.3
42.5°	779.7	616.7	364.1	215.8	169.2
45°	731.9	561.5	301.6	160.6	116.5
47.5°	689.0	507.5	241.5	109.1	68.7
50°	642.4	449.9	187.6	63.7	29.4
52.5°	595.8	396.0	137.3	28.2	22.1
55°	550.5	342.0	90.7	20.8	17.2
57.5°	502.6	288.1	49.0	15.9	12.3
60°	456.1	235.4	24.5	12.3	8.6
62.5°	408.2	185.1	19.6	7.4	4.9
65°	360.4	138.5	13.5	4.9	3.7
67.5°	312.6	94.4	8.6	2.5	1.2
70°	263.6	57.6	4.9	1.2	1.2
72.5°	217.0	29.4	2.5	1.2	1.2
75°	171.6	18.4	1.2	1.2	0.0
77.5°	127.5	9.8	1.2	1.2	0.0
80°	87.0	3.7	0.0	0.0	0.0
82.5°	50.3	1.2	0.0	0.0	0.0
85°	18.4	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	18.80	20.13	19.17	20.45	20.76	0.00	0.00	0.00	0.00	0.00
	3H	20.35	21.52	20.73	21.85	22.22	0.00	0.00	0.00	0.00	0.00
	4H	20.94	22.04	21.34	22.39	22.77	0.00	0.00	0.00	0.00	0.00
	6H	21.36	22.36	21.77	22.73	23.13	0.00	0.00	0.00	0.00	0.00
	8H	21.46	22.41	21.89	22.80	23.20	0.00	0.00	0.00	0.00	0.00
	12H	21.48	22.39	21.91	22.77	23.20	0.00	0.00	0.00	0.00	0.00
4H	2H	18.58	19.68	18.98	20.03	20.41	0.00	0.00	0.00	0.00	0.28
	3H	20.14	21.04	20.56	21.44	21.85	0.00	0.00	0.00	0.00	0.11
	4H	20.73	21.53	21.16	21.95	22.39	0.00	0.00	0.00	0.00	0.02
	6H	21.19	21.88	21.65	22.32	22.79	0.00	0.00	0.00	0.00	0.00
	8H	21.31	21.95	21.78	22.40	22.87	0.00	0.00	0.00	0.00	0.00
	12H	21.35	21.91	21.83	22.40	22.87	0.00	0.00	0.00	0.00	0.00
8H	4H	20.59	21.23	21.06	21.68	22.15	0.09	0.74	0.56	1.18	1.65
	6H	21.03	21.55	21.54	22.05	22.53	0.00	0.53	0.51	1.02	1.50
	8H	21.15	21.62	21.67	22.13	22.63	0.00	0.41	0.46	0.93	1.42
	12H	21.20	21.61	21.71	22.11	22.68	0.00	0.31	0.41	0.81	1.38
12H	4H	20.55	21.11	21.03	21.59	22.07	0.51	1.07	0.99	1.56	2.03
	6H	20.97	21.44	21.49	21.95	22.45	0.40	0.87	0.92	1.38	1.88
	8H	21.11	21.52	21.62	22.01	22.58	0.36	0.77	0.87	1.26	1.84