

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: P1055972

Luminaire Tested: S124R3DR-S1020D935-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055972
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-9)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-S1020D935-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

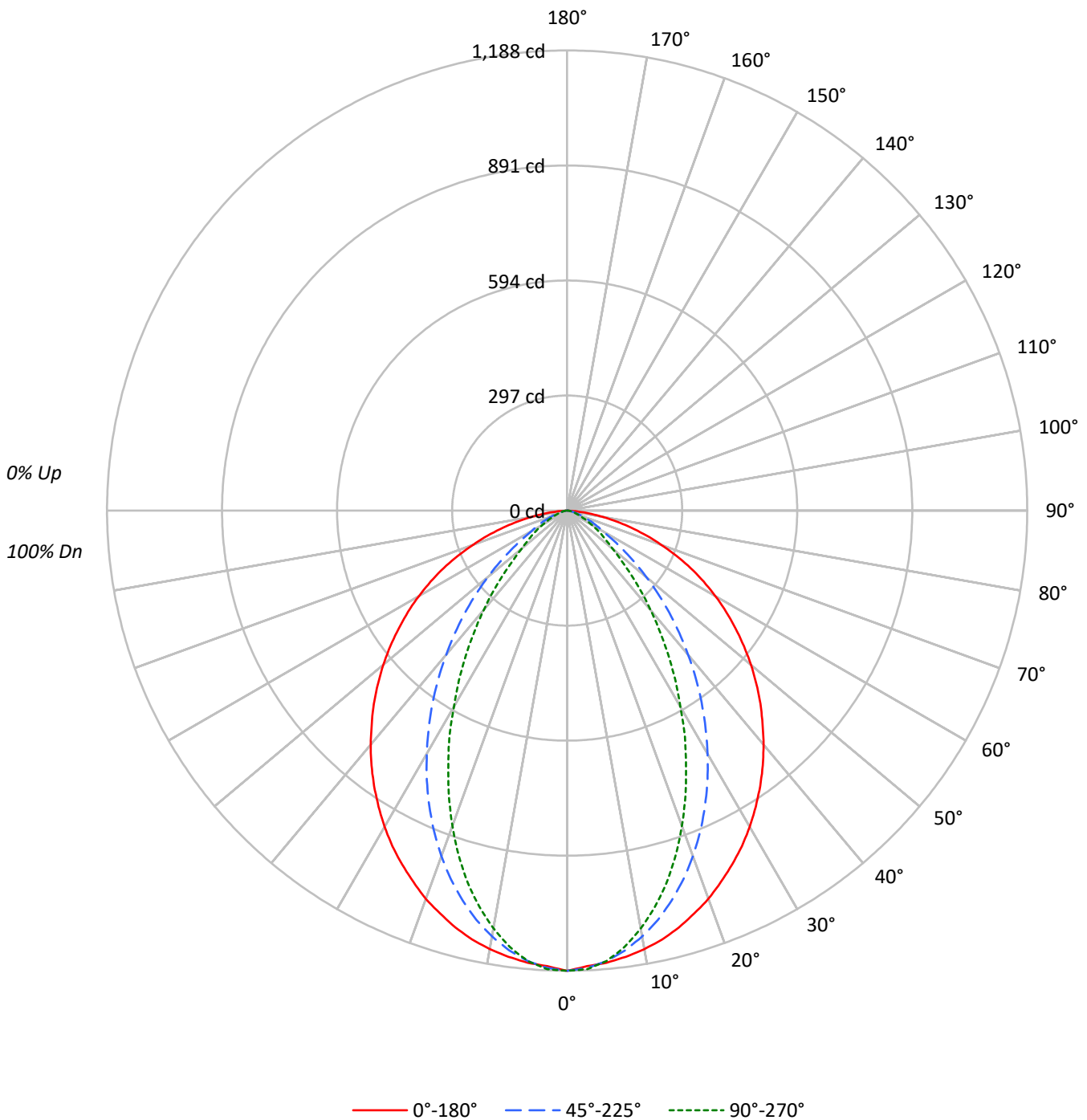
Lumens per Lamp: N/A
Luminaire Lumens: 1921.5 lumens
Efficiency: N/A
Efficacy: 55.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
Input Voltage (V): 120
Input Current (A_{in}): 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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89					89			
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78					78			
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68					68			
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	71	66	62	60					60			
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54					54			
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	48					48			
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44					44			
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40					40			
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37					37			
10	60	48	41	36	59	47	40	36	46	40	36	45	40	35	45	39	35	34					34			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10506	10506	10506
5°	10399	10360	10360
10°	10321	10023	9834
15°	10199	9540	9095
20°	10035	8932	8151
25°	9833	8214	7080
30°	9624	7399	5964
35°	9375	6532	4908
40°	9105	5606	3870
45°	8826	4663	2891
50°	8522	3668	2115
55°	8187	2711	1688
60°	7826	1878	1291
65°	7360	1458	950
70°	6664	1029	744
75°	5821	717	567
80°	4674	565	509
85°	2577	446	446

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8826 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.2	5.7
10°-20°	294.5	15.3
20°-30°	392.8	20.4
30°-40°	395.5	20.6
40°-50°	324.4	16.9
50°-60°	221.7	11.5
60°-70°	123.9	6.4
70°-80°	49.1	2.6
80°-90°	9.3	0.5
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°	797.5	41.5
0°-40°	1193.1	62.1
0°-60°	1739.1	90.5
0°-90°	1921.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1921.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1188	1188	1188	1188	1188	
5°	1172	1185	1167	1162	1167	111
15°	1114	1102	1042	1006	994	314
25°	1008	958	842	757	726	464
35°	869	777	605	490	455	543
45°	706	576	373	262	231	544
55°	531	373	176	117	110	475
65°	352	177	70	50	45	348
75°	170	46	21	18	17	183
85°	25	4	4	4	4	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1188.3	1188.3	1188.3	1188.3	1188.3
2.5°	1177.2	1191.6	1181.7	1182.8	1185.0
5°	1171.7	1185.0	1167.3	1161.8	1167.3
7.5°	1161.8	1171.7	1145.2	1134.1	1136.3
10°	1149.6	1152.9	1116.4	1097.6	1095.4
12.5°	1134.1	1129.7	1082.1	1054.4	1047.8
15°	1114.2	1102.0	1042.3	1005.8	993.6
17.5°	1090.9	1069.9	998.0	950.4	932.7
20°	1066.6	1035.6	949.3	888.5	866.3
22.5°	1037.8	999.1	897.3	823.2	797.7
25°	1008.0	958.2	842.0	756.8	725.8
27.5°	977.0	916.1	784.5	689.3	658.3
30°	942.7	870.8	724.7	621.8	584.2
32.5°	906.2	824.3	665.0	555.4	520.0
35°	868.6	776.7	605.2	490.2	454.7
37.5°	829.8	728.0	545.5	428.2	392.8
40°	788.9	678.2	485.7	369.6	335.3
42.5°	746.8	627.4	428.2	314.2	282.1
45°	705.9	576.5	372.9	262.2	231.2
47.5°	662.8	525.6	318.7	213.5	187.0
50°	619.6	474.7	266.7	171.5	153.8
52.5°	575.3	423.8	219.1	140.5	128.3
55°	531.1	372.9	175.9	117.3	109.5
57.5°	486.8	322.0	136.1	99.6	90.7
60°	442.6	272.2	106.2	80.8	73.0
62.5°	397.2	222.4	87.4	64.2	57.5
65°	351.8	177.0	69.7	49.8	45.4
67.5°	306.5	135.0	53.1	38.7	35.4
70°	257.8	96.3	39.8	29.9	28.8
72.5°	215.8	65.3	28.8	23.2	22.1
75°	170.4	46.5	21.0	17.7	16.6
77.5°	131.7	29.9	15.5	14.4	13.3
80°	91.8	16.6	11.1	10.0	10.0
82.5°	56.4	8.9	7.7	6.6	6.6
85°	25.4	4.4	4.4	4.4	4.4
87.5°	4.4	2.2	2.2	2.2	2.2
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	18.90	20.30	19.26	20.62	20.93	9.99	11.39	10.35	11.71	12.02
	3H	20.48	21.73	20.86	22.06	22.43	10.58	11.83	10.96	12.16	12.52
	4H	21.08	22.25	21.48	22.60	22.98	10.74	11.90	11.14	12.25	12.64
	6H	21.51	22.58	21.92	22.95	23.35	10.84	11.92	11.26	12.29	12.68
	8H	21.62	22.64	22.05	23.03	23.44	10.86	11.88	11.29	12.27	12.68
	12H	21.66	22.64	22.10	23.02	23.45	10.87	11.85	11.30	12.23	12.66
4H	2H	18.75	19.92	19.15	20.27	20.65	10.57	11.74	10.97	12.09	12.47
	3H	20.40	21.36	20.81	21.76	22.16	11.28	12.24	11.69	12.64	13.05
	4H	21.00	21.86	21.44	22.28	22.72	11.49	12.34	11.92	12.76	13.20
	6H	21.50	22.24	21.96	22.68	23.15	11.65	12.39	12.11	12.84	13.30
	8H	21.64	22.33	22.11	22.78	23.25	11.69	12.38	12.15	12.82	13.29
	12H	21.71	22.32	22.20	22.81	23.28	11.71	12.32	12.19	12.80	13.28
8H	4H	20.90	21.59	21.36	22.03	22.50	11.76	12.45	12.22	12.89	13.36
	6H	21.38	21.94	21.88	22.44	22.92	11.96	12.53	12.46	13.02	13.50
	8H	21.52	22.03	22.04	22.54	23.03	12.02	12.53	12.54	13.04	13.53
	12H	21.61	22.06	22.13	22.56	23.12	12.08	12.53	12.59	13.02	13.59
12H	4H	20.86	21.47	21.34	21.95	22.43	11.78	12.40	12.27	12.88	13.35
	6H	21.32	21.83	21.84	22.35	22.84	11.99	12.50	12.51	13.01	13.50
	8H	21.49	21.94	22.00	22.43	23.00	12.08	12.53	12.60	13.03	13.59