

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: P1056131

Luminaire Tested: S124R3DR-H1195D930-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056131
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-H1195D930-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

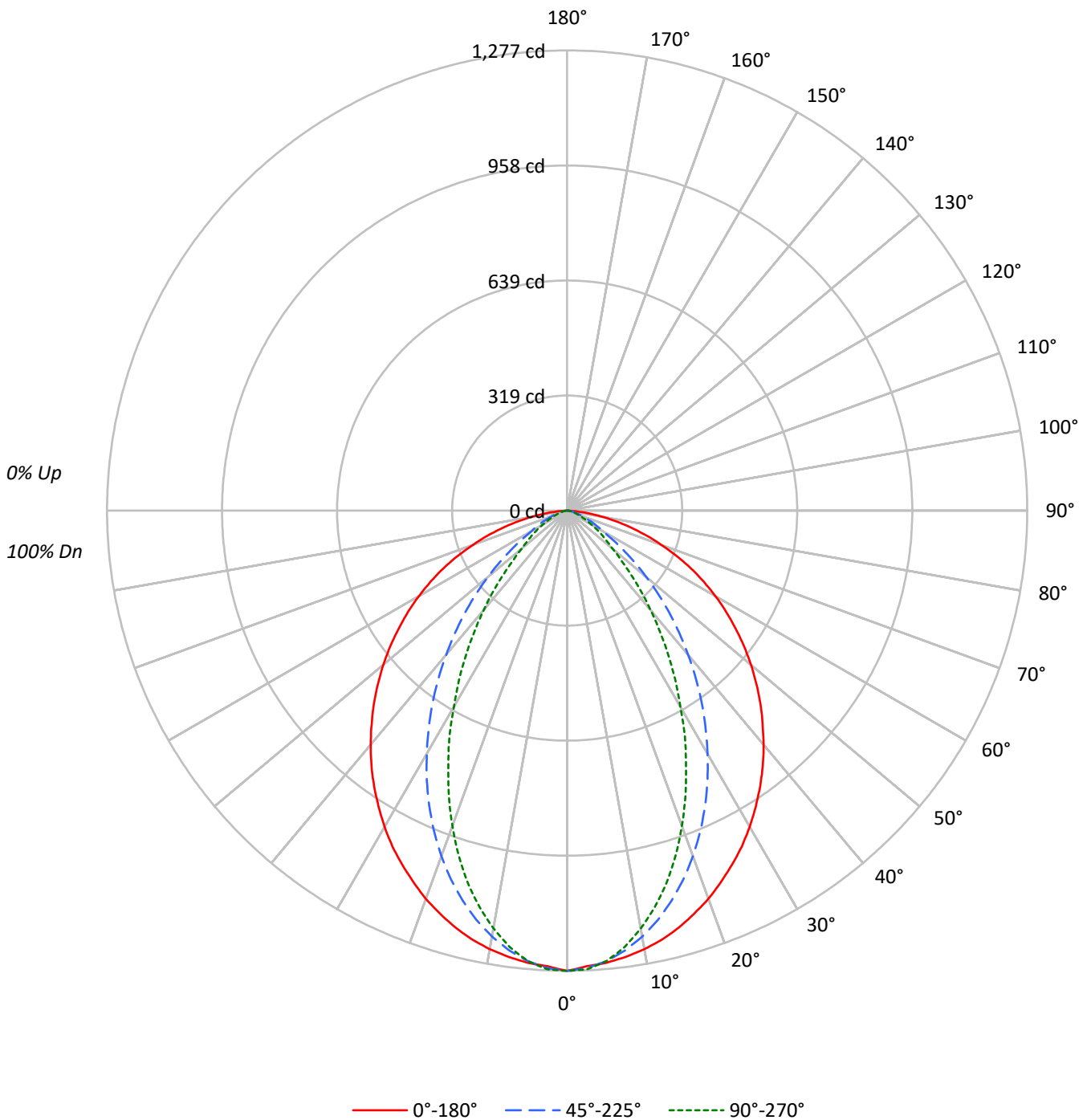
Lumens per Lamp: N/A
Luminaire Lumens: 2065.6 lumens
Efficiency: N/A
Efficacy: 56.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
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°	11294	11294	11294
5°	11179	11137	11137
10°	11095	10774	10571
15°	10964	10255	9777
20°	10788	9602	8762
25°	10571	8831	7612
30°	10346	7954	6411
35°	10078	7022	5277
40°	9788	6027	4160
45°	9489	5011	3108
50°	9162	3943	2274
55°	8800	2915	1816
60°	8413	2019	1388
65°	7912	1567	1021
70°	7163	1106	799
75°	6258	772	608
80°	5025	606	545
85°	2780	487	487

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9489 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.5	5.7
10°-20°	316.6	15.3
20°-30°	422.3	20.4
30°-40°	425.2	20.6
40°-50°	348.7	16.9
50°-60°	238.3	11.5
60°-70°	133.2	6.4
70°-80°	52.8	2.6
80°-90°	10.0	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°	857.4	41.5
0°-40°	1282.5	62.1
0°-60°	1869.6	90.5
0°-90°	2065.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2065.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1277	1277	1277	1277	1277	
5°	1260	1274	1255	1249	1255	119
15°	1198	1185	1120	1081	1068	338
25°	1084	1030	905	814	780	499
35°	934	835	651	527	489	584
45°	759	620	401	282	249	585
55°	571	401	189	126	118	511
65°	378	190	75	54	49	374
75°	183	50	23	19	18	196
85°	27	5	5	5	5	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1277.4	1277.4	1277.4	1277.4	1277.4
2.5°	1265.5	1281.0	1270.3	1271.5	1273.9
5°	1259.6	1273.9	1254.8	1248.9	1254.8
7.5°	1248.9	1259.6	1231.1	1219.2	1221.5
10°	1235.8	1239.4	1200.1	1179.9	1177.5
12.5°	1219.2	1214.4	1163.3	1133.5	1126.4
15°	1197.8	1184.7	1120.4	1081.2	1068.1
17.5°	1172.8	1150.2	1072.9	1021.7	1002.7
20°	1146.6	1113.3	1020.5	955.1	931.3
22.5°	1115.7	1074.1	964.6	884.9	857.6
25°	1083.6	1030.0	905.2	813.6	780.3
27.5°	1050.3	984.8	843.3	741.0	707.7
30°	1013.4	936.1	779.1	668.5	628.0
32.5°	974.1	886.1	714.8	597.1	559.0
35°	933.7	835.0	650.6	526.9	488.9
37.5°	892.1	782.6	586.4	460.3	422.2
40°	848.1	729.1	522.2	397.3	360.4
42.5°	802.9	674.4	460.3	337.8	303.3
45°	758.9	619.7	400.8	281.9	248.6
47.5°	712.5	565.0	342.6	229.6	201.0
50°	666.1	510.3	286.7	184.4	165.3
52.5°	618.5	455.5	235.5	151.1	138.0
55°	570.9	400.8	189.1	126.1	117.8
57.5°	523.3	346.1	146.3	107.0	97.5
60°	475.8	292.6	114.2	86.8	78.5
62.5°	427.0	239.1	94.0	69.0	61.9
65°	378.2	190.3	74.9	53.5	48.8
67.5°	329.5	145.1	57.1	41.6	38.1
70°	277.1	103.5	42.8	32.1	30.9
72.5°	231.9	70.2	30.9	25.0	23.8
75°	183.2	50.0	22.6	19.0	17.8
77.5°	141.5	32.1	16.7	15.5	14.3
80°	98.7	17.8	11.9	10.7	10.7
82.5°	60.7	9.5	8.3	7.1	7.1
85°	27.4	4.8	4.8	4.8	4.8
87.5°	4.8	2.4	2.4	2.4	2.4
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	19.15	20.55	19.51	20.87	21.18	10.23	11.64	10.60	11.95	12.27
	3H	20.73	21.98	21.11	22.31	22.68	10.83	12.08	11.20	12.41	12.77
	4H	21.33	22.50	21.73	22.85	23.23	10.98	12.15	11.38	12.50	12.88
	6H	21.76	22.83	22.17	23.20	23.60	11.09	12.17	11.50	12.53	12.93
	8H	21.87	22.89	22.30	23.28	23.69	11.11	12.13	11.54	12.52	12.92
	12H	21.92	22.89	22.35	23.27	23.70	11.12	12.09	11.55	12.48	12.91
4H	2H	19.00	20.17	19.40	20.52	20.90	10.82	11.99	11.22	12.34	12.72
	3H	20.65	21.61	21.06	22.01	22.41	11.53	12.49	11.94	12.89	13.29
	4H	21.25	22.11	21.69	22.53	22.97	11.73	12.59	12.17	13.01	13.45
	6H	21.75	22.49	22.21	22.93	23.40	11.90	12.64	12.36	13.09	13.55
	8H	21.89	22.58	22.36	23.03	23.50	11.93	12.62	12.40	13.07	13.54
	12H	21.96	22.58	22.45	23.06	23.53	11.96	12.57	12.44	13.05	13.53
8H	4H	21.15	21.84	21.61	22.29	22.75	12.01	12.70	12.47	13.14	13.61
	6H	21.63	22.19	22.13	22.69	23.17	12.21	12.78	12.71	13.27	13.75
	8H	21.77	22.28	22.29	22.79	23.28	12.27	12.77	12.79	13.29	13.78
	12H	21.86	22.31	22.38	22.81	23.38	12.33	12.77	12.84	13.27	13.84
12H	4H	21.11	21.72	21.59	22.20	22.68	12.03	12.65	12.52	13.13	13.60
	6H	21.57	22.08	22.09	22.60	23.09	12.24	12.75	12.76	13.26	13.75
	8H	21.74	22.19	22.25	22.68	23.25	12.33	12.78	12.84	13.27	13.84