

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: P1055969

Luminaire Tested: S124R3DRP-S1020D930-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055969
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: S124R3DRP-S1020D930-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

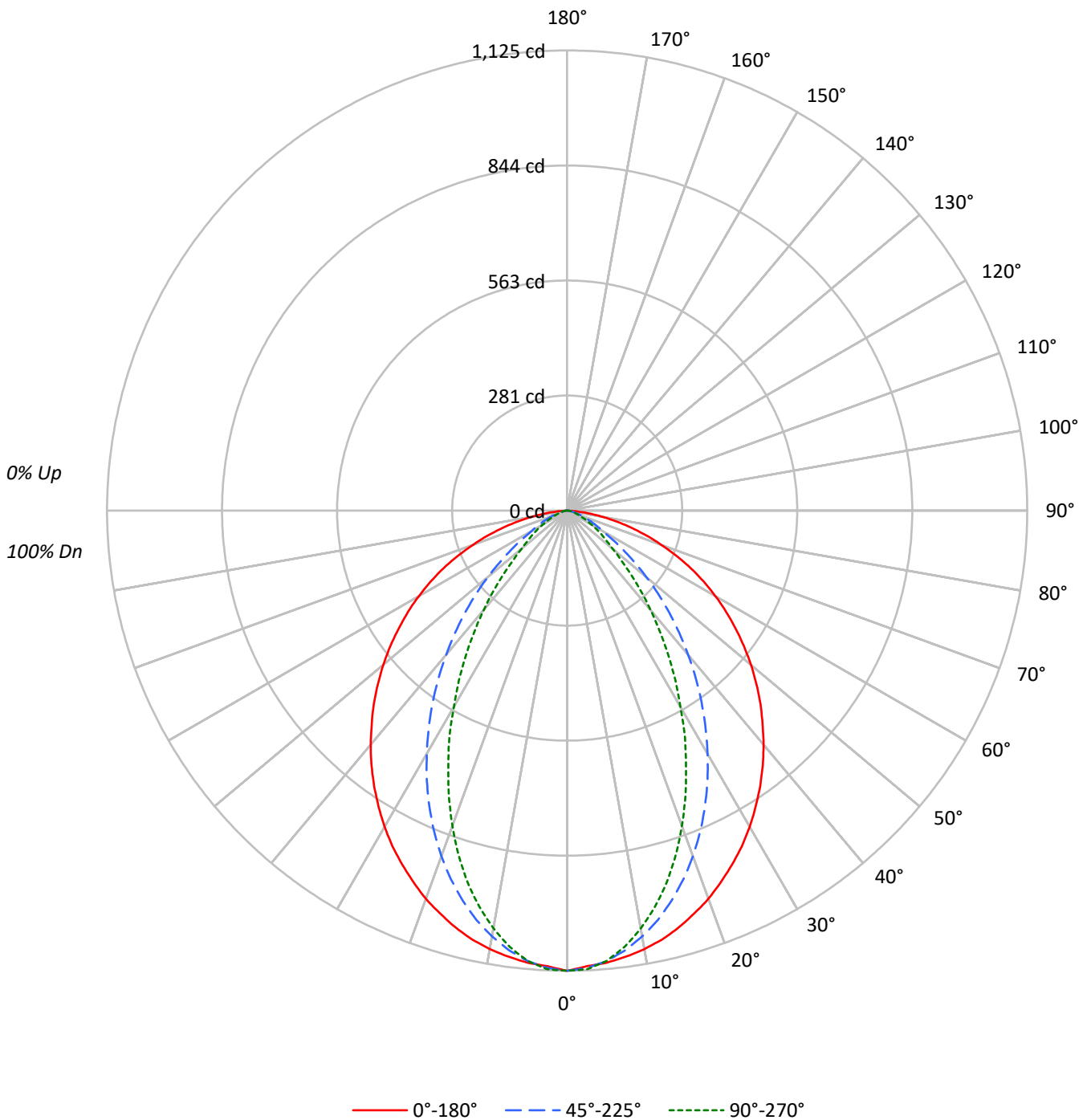
Lumens per Lamp: N/A
Luminaire Lumens: 1819.5 lumens
Efficiency: N/A
Efficacy: 52.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9948	9948	9948
5°	9847	9810	9810
10°	9773	9490	9312
15°	9657	9033	8611
20°	9503	8458	7719
25°	9312	7778	6705
30°	9113	7007	5648
35°	8878	6186	4648
40°	8622	5308	3664
45°	8357	4415	2738
50°	8070	3473	2003
55°	7752	2568	1598
60°	7411	1779	1222
65°	6971	1381	900
70°	6310	975	703
75°	5510	680	536
80°	4430	535	479
85°	2445	426	426

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8357 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.4	5.7
10°-20°	278.9	15.3
20°-30°	372.0	20.4
30°-40°	374.5	20.6
40°-50°	307.1	16.9
50°-60°	210.0	11.5
60°-70°	117.3	6.4
70°-80°	46.5	2.6
80°-90°	8.8	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°	755.2	41.5
0°-40°	1129.7	62.1
0°-60°	1646.8	90.5
0°-90°	1819.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1819.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1125	1125	1125	1125	1125	
5°	1110	1122	1105	1100	1105	105
15°	1055	1044	987	952	941	297
25°	954	907	797	717	687	440
35°	822	736	573	464	431	514
45°	668	546	353	248	219	515
55°	503	353	167	111	104	450
65°	333	168	66	47	43	329
75°	161	44	20	17	16	173
85°	24	4	4	4	4	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1125.2	1125.2	1125.2	1125.2	1125.2
2.5°	1114.8	1128.4	1119.0	1120.0	1122.1
5°	1109.5	1122.1	1105.3	1100.1	1105.3
7.5°	1100.1	1109.5	1084.4	1073.9	1076.0
10°	1088.6	1091.7	1057.1	1039.3	1037.2
12.5°	1073.9	1069.7	1024.7	998.5	992.2
15°	1055.0	1043.5	986.9	952.4	940.8
17.5°	1033.0	1013.1	945.0	900.0	883.2
20°	1010.0	980.7	898.9	841.3	820.4
22.5°	982.8	946.1	849.7	779.5	755.4
25°	954.5	907.3	797.3	716.6	687.3
27.5°	925.1	867.5	742.8	652.7	623.4
30°	892.6	824.5	686.3	588.8	553.2
32.5°	858.1	780.5	629.7	526.0	492.4
35°	822.5	735.5	573.1	464.1	430.6
37.5°	785.8	689.4	516.5	405.5	371.9
40°	747.0	642.2	459.9	349.9	317.5
42.5°	707.2	594.1	405.5	297.5	267.2
45°	668.4	545.9	353.1	248.3	219.0
47.5°	627.6	497.7	301.7	202.2	177.1
50°	586.7	449.5	252.5	162.4	145.6
52.5°	544.8	401.3	207.4	133.1	121.5
55°	502.9	353.1	166.6	111.1	103.7
57.5°	461.0	304.9	128.9	94.3	85.9
60°	419.1	257.7	100.6	76.5	69.1
62.5°	376.1	210.6	82.8	60.8	54.5
65°	333.2	167.6	66.0	47.1	43.0
67.5°	290.2	127.8	50.3	36.7	33.5
70°	244.1	91.2	37.7	28.3	27.2
72.5°	204.3	61.8	27.2	22.0	21.0
75°	161.3	44.0	19.9	16.8	15.7
77.5°	124.7	28.3	14.7	13.6	12.6
80°	87.0	15.7	10.5	9.4	9.4
82.5°	53.4	8.4	7.3	6.3	6.3
85°	24.1	4.2	4.2	4.2	4.2
87.5°	4.2	2.1	2.1	2.1	2.1
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	18.71	20.11	19.07	20.43	20.74	9.80	11.20	10.16	11.52	11.83
	3H	20.29	21.54	20.67	21.87	22.24	10.39	11.64	10.77	11.97	12.33
	4H	20.89	22.06	21.29	22.41	22.79	10.55	11.71	10.95	12.06	12.45
	6H	21.32	22.39	21.73	22.76	23.16	10.65	11.73	11.07	12.10	12.49
	8H	21.43	22.45	21.86	22.84	23.25	10.67	11.69	11.10	12.08	12.49
	12H	21.47	22.45	21.91	22.83	23.26	10.68	11.66	11.11	12.04	12.47
4H	2H	18.56	19.73	18.96	20.08	20.46	10.38	11.55	10.78	11.90	12.28
	3H	20.21	21.17	20.62	21.57	21.97	11.09	12.05	11.50	12.45	12.86
	4H	20.81	21.67	21.25	22.09	22.53	11.30	12.15	11.73	12.57	13.01
	6H	21.31	22.05	21.77	22.49	22.96	11.46	12.20	11.92	12.65	13.11
	8H	21.45	22.14	21.92	22.59	23.06	11.49	12.19	11.96	12.63	13.10
	12H	21.52	22.14	22.01	22.62	23.09	11.52	12.13	12.01	12.62	13.09
8H	4H	20.71	21.40	21.17	21.84	22.31	11.57	12.26	12.03	12.71	13.17
	6H	21.19	21.75	21.69	22.25	22.73	11.77	12.34	12.27	12.83	13.31
	8H	21.33	21.84	21.85	22.35	22.84	11.83	12.34	12.35	12.85	13.34
	12H	21.42	21.87	21.94	22.37	22.93	11.89	12.34	12.40	12.83	13.40
12H	4H	20.67	21.28	21.15	21.76	22.24	11.59	12.21	12.08	12.69	13.16
	6H	21.13	21.64	21.65	22.16	22.65	11.80	12.31	12.32	12.82	13.31
	8H	21.30	21.75	21.81	22.24	22.81	11.89	12.34	12.41	12.83	13.40