

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: P1056002

Luminaire Tested: S124R3DR-S1195D940-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056002
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-S1195D940-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

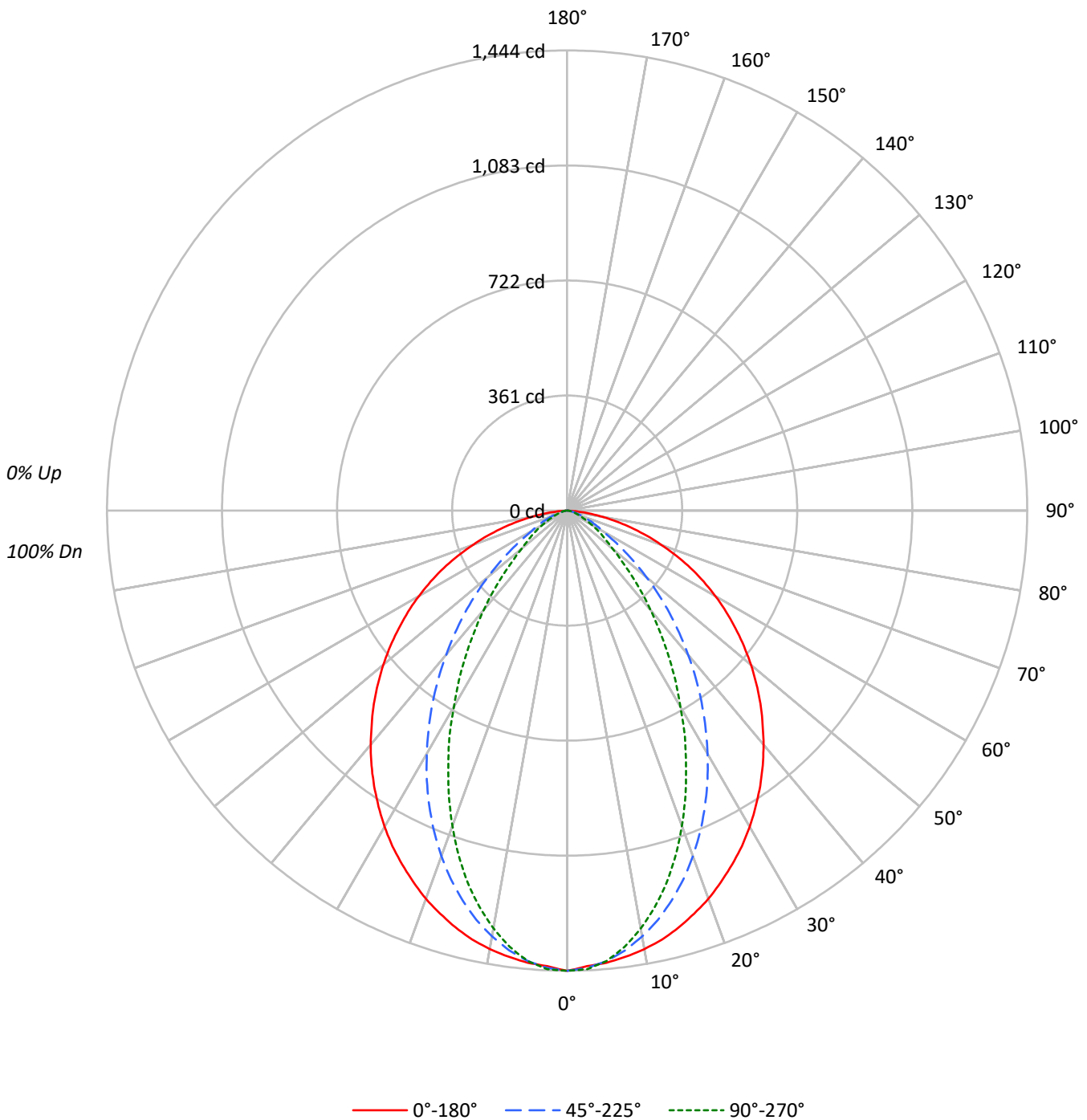
Lumens per Lamp: N/A
Luminaire Lumens: 2335.5 lumens
Efficiency: N/A
Efficacy: 55.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
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	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°	12770	12770	12770
5°	12640	12592	12592
10°	12545	12182	11953
15°	12395	11595	11054
20°	12198	10857	9907
25°	11951	9984	8606
30°	11698	8993	7250
35°	11395	7940	5965
40°	11067	6814	4703
45°	10728	5667	3515
50°	10359	4458	2571
55°	9950	3296	2052
60°	9512	2283	1570
65°	8948	1772	1153
70°	8099	1251	905
75°	7075	875	690
80°	5682	682	616
85°	3135	548	548

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10728 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.0	5.7
10°-20°	358.0	15.3
20°-30°	477.5	20.4
30°-40°	480.7	20.6
40°-50°	394.2	16.9
50°-60°	269.5	11.5
60°-70°	150.6	6.4
70°-80°	59.7	2.6
80°-90°	11.3	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°	969.4	41.5
0°-40°	1450.1	62.1
0°-60°	2113.8	90.5
0°-90°	2335.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2335.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1444	1444	1444	1444	1444	
5°	1424	1440	1419	1412	1419	135
15°	1354	1340	1267	1222	1208	382
25°	1225	1165	1023	920	882	564
35°	1056	944	736	596	553	660
45°	858	701	453	319	281	661
55°	646	453	214	143	133	577
65°	428	215	85	60	55	423
75°	207	56	26	22	20	222
85°	31	5	5	5	5	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1444.4	1444.4	1444.4	1444.4	1444.4
2.5°	1430.9	1448.4	1436.3	1437.6	1440.3
5°	1424.2	1440.3	1418.8	1412.1	1418.8
7.5°	1412.1	1424.2	1391.9	1378.5	1381.1
10°	1397.3	1401.3	1356.9	1334.1	1331.4
12.5°	1378.5	1373.1	1315.2	1281.6	1273.6
15°	1354.2	1339.5	1266.8	1222.5	1207.7
17.5°	1326.0	1300.5	1213.0	1155.2	1133.7
20°	1296.4	1258.8	1153.9	1079.9	1053.0
22.5°	1261.5	1214.4	1090.7	1000.6	969.6
25°	1225.1	1164.6	1023.4	919.9	882.2
27.5°	1187.5	1113.5	953.5	837.8	800.2
30°	1145.8	1058.4	880.9	755.8	710.1
32.5°	1101.4	1001.9	808.2	675.1	632.1
35°	1055.7	944.1	735.6	595.8	552.7
37.5°	1008.6	884.9	663.0	520.5	477.4
40°	958.9	824.4	590.4	449.2	407.5
42.5°	907.8	762.5	520.5	381.9	342.9
45°	858.0	700.7	453.2	318.7	281.1
47.5°	805.6	638.8	387.3	259.6	227.3
50°	753.1	576.9	324.1	208.4	186.9
52.5°	699.3	515.1	266.3	170.8	156.0
55°	645.5	453.2	213.8	142.6	133.1
57.5°	591.7	391.3	165.4	121.0	110.3
60°	537.9	330.8	129.1	98.2	88.8
62.5°	482.8	270.3	106.2	78.0	69.9
65°	427.7	215.2	84.7	60.5	55.1
67.5°	372.5	164.1	64.6	47.1	43.0
70°	313.3	117.0	48.4	36.3	35.0
72.5°	262.2	79.3	35.0	28.2	26.9
75°	207.1	56.5	25.6	21.5	20.2
77.5°	160.0	36.3	18.8	17.5	16.1
80°	111.6	20.2	13.4	12.1	12.1
82.5°	68.6	10.8	9.4	8.1	8.1
85°	30.9	5.4	5.4	5.4	5.4
87.5°	5.4	2.7	2.7	2.7	2.7
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	19.57	20.98	19.94	21.29	21.61	10.66	12.07	11.03	12.38	12.70
	3H	21.16	22.41	21.54	22.74	23.10	11.25	12.51	11.63	12.84	13.20
	4H	21.75	22.92	22.16	23.27	23.65	11.41	12.58	11.81	12.93	13.31
	6H	22.19	23.26	22.60	23.63	24.02	11.52	12.59	11.93	12.96	13.36
	8H	22.30	23.32	22.73	23.71	24.11	11.54	12.56	11.97	12.95	13.35
	12H	22.34	23.32	22.77	23.70	24.13	11.55	12.52	11.98	12.91	13.34
4H	2H	19.43	20.60	19.83	20.95	21.33	11.25	12.41	11.65	12.76	13.15
	3H	21.07	22.03	21.49	22.44	22.84	11.96	12.92	12.37	13.32	13.72
	4H	21.68	22.54	22.11	22.96	23.40	12.16	13.02	12.60	13.44	13.88
	6H	22.17	22.91	22.63	23.36	23.82	12.33	13.07	12.79	13.51	13.98
	8H	22.32	23.01	22.78	23.45	23.92	12.36	13.05	12.83	13.50	13.97
	12H	22.39	23.00	22.87	23.48	23.96	12.39	13.00	12.87	13.48	13.96
8H	4H	21.57	22.27	22.04	22.71	23.18	12.43	13.13	12.90	13.57	14.04
	6H	22.05	22.62	22.56	23.12	23.60	12.64	13.20	13.14	13.70	14.18
	8H	22.20	22.71	22.72	23.22	23.71	12.69	13.20	13.21	13.72	14.21
	12H	22.29	22.74	22.80	23.23	23.80	12.76	13.20	13.27	13.70	14.27
12H	4H	21.53	22.15	22.02	22.63	23.10	12.46	13.07	12.95	13.56	14.03
	6H	22.00	22.51	22.52	23.02	23.51	12.67	13.17	13.18	13.69	14.18
	8H	22.16	22.61	22.68	23.11	23.68	12.76	13.21	13.27	13.70	14.27