

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: P1056137

Luminaire Tested: S124R3DR-H1195D940-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056137
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-H1195D940-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

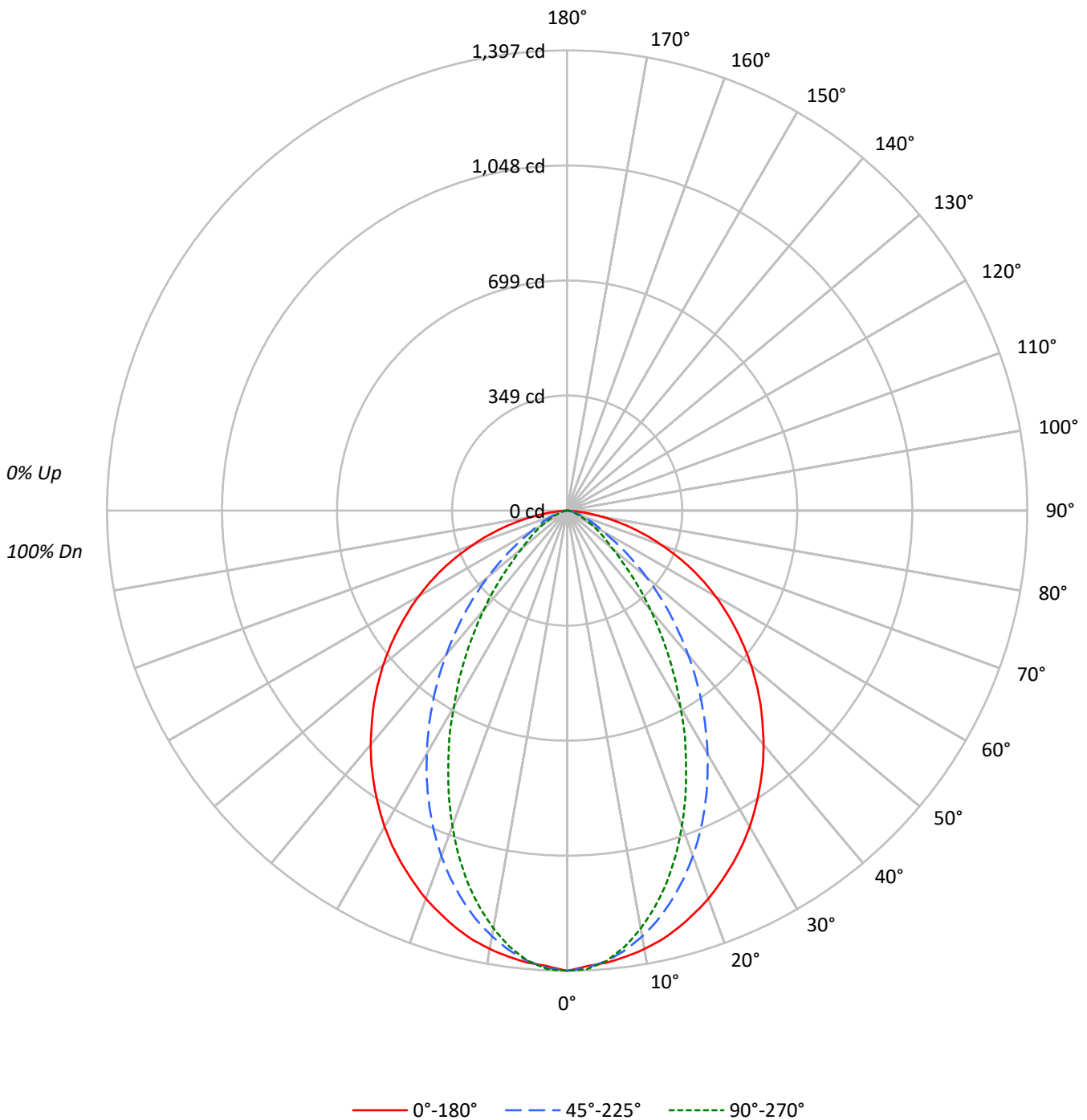
Lumens per Lamp: N/A
Luminaire Lumens: 2259.1 lumens
Efficiency: N/A
Efficacy: 61.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	12353	12353	12353
5°	12227	12181	12181
10°	12134	11784	11562
15°	11991	11216	10693
20°	11800	10502	9584
25°	11561	9658	8325
30°	11316	8699	7013
35°	11022	7681	5771
40°	10705	6591	4550
45°	10378	5482	3400
50°	10020	4312	2487
55°	9625	3188	1985
60°	9202	2209	1519
65°	8655	1715	1115
70°	7835	1210	874
75°	6842	844	666
80°	5499	662	596
85°	3033	528	528

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10378 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.6	5.7
10°-20°	346.3	15.3
20°-30°	461.9	20.4
30°-40°	465.0	20.6
40°-50°	381.4	16.9
50°-60°	260.7	11.5
60°-70°	145.7	6.4
70°-80°	57.7	2.6
80°-90°	11.0	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°	937.7	41.5
0°-40°	1402.7	62.1
0°-60°	2044.8	90.5
0°-90°	2259.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2259.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1397	1397	1397	1397	1397	
5°	1378	1393	1372	1366	1372	131
15°	1310	1296	1225	1182	1168	369
25°	1185	1127	990	890	853	546
35°	1021	913	712	576	535	639
45°	830	678	438	308	272	640
55°	624	438	207	138	129	558
65°	414	208	82	58	53	409
75°	200	55	25	21	20	215
85°	30	5	5	5	5	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1397.2	1397.2	1397.2	1397.2	1397.2
2.5°	1384.2	1401.1	1389.4	1390.7	1393.3
5°	1377.7	1393.3	1372.5	1365.9	1372.5
7.5°	1365.9	1377.7	1346.4	1333.4	1336.0
10°	1351.6	1355.5	1312.6	1290.5	1287.9
12.5°	1333.4	1328.2	1272.3	1239.8	1232.0
15°	1310.0	1295.7	1225.4	1182.5	1168.2
17.5°	1282.7	1258.0	1173.4	1117.5	1096.7
20°	1254.1	1217.6	1116.2	1044.6	1018.6
22.5°	1220.2	1174.7	1055.0	967.9	937.9
25°	1185.1	1126.6	990.0	889.8	853.4
27.5°	1148.7	1077.1	922.3	810.5	774.0
30°	1108.4	1023.8	852.1	731.1	686.9
32.5°	1065.4	969.2	781.8	653.1	611.4
35°	1021.2	913.2	711.6	576.3	534.7
37.5°	975.7	856.0	641.3	503.4	461.8
40°	927.5	797.5	571.1	434.5	394.2
42.5°	878.1	737.6	503.4	369.5	331.7
45°	830.0	677.8	438.4	308.3	271.9
47.5°	779.2	617.9	374.7	251.1	219.9
50°	728.5	558.1	313.5	201.6	180.8
52.5°	676.5	498.2	257.6	165.2	150.9
55°	624.4	438.4	206.8	137.9	128.8
57.5°	572.4	378.6	160.0	117.1	106.7
60°	520.4	320.0	124.9	95.0	85.9
62.5°	467.0	261.5	102.8	75.5	67.6
65°	413.7	208.1	82.0	58.5	53.3
67.5°	360.3	158.7	62.4	45.5	41.6
70°	303.1	113.2	46.8	35.1	33.8
72.5°	253.7	76.8	33.8	27.3	26.0
75°	200.3	54.6	24.7	20.8	19.5
77.5°	154.8	35.1	18.2	16.9	15.6
80°	108.0	19.5	13.0	11.7	11.7
82.5°	66.3	10.4	9.1	7.8	7.8
85°	29.9	5.2	5.2	5.2	5.2
87.5°	5.2	2.6	2.6	2.6	2.6
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	19.46	20.87	19.82	21.18	21.49	10.55	11.96	10.91	12.27	12.58
	3H	21.04	22.30	21.42	22.63	22.99	11.14	12.39	11.52	12.72	13.08
	4H	21.64	22.81	22.04	23.16	23.54	11.30	12.47	11.70	12.82	13.20
	6H	22.07	23.15	22.48	23.51	23.91	11.40	12.48	11.82	12.85	13.24
	8H	22.18	23.20	22.61	23.59	24.00	11.42	12.44	11.85	12.83	13.24
	12H	22.23	23.20	22.66	23.58	24.01	11.43	12.41	11.86	12.79	13.22
4H	2H	19.31	20.48	19.71	20.83	21.21	11.13	12.30	11.53	12.65	13.03
	3H	20.96	21.92	21.37	22.32	22.72	11.84	12.80	12.26	13.21	13.61
	4H	21.57	22.42	22.00	22.84	23.28	12.05	12.91	12.48	13.32	13.76
	6H	22.06	22.80	22.52	23.24	23.71	12.21	12.96	12.67	13.40	13.86
	8H	22.20	22.89	22.67	23.34	23.81	12.25	12.94	12.71	13.38	13.85
	12H	22.27	22.89	22.76	23.37	23.84	12.27	12.89	12.76	13.37	13.84
8H	4H	21.46	22.15	21.93	22.60	23.07	12.32	13.01	12.79	13.46	13.93
	6H	21.94	22.51	22.44	23.00	23.48	12.52	13.09	13.02	13.58	14.06
	8H	22.08	22.59	22.60	23.11	23.60	12.58	13.09	13.10	13.60	14.09
	12H	22.17	22.62	22.69	23.12	23.69	12.64	13.09	13.15	13.58	14.15
12H	4H	21.42	22.03	21.90	22.51	22.99	12.35	12.96	12.83	13.44	13.91
	6H	21.89	22.39	22.40	22.91	23.40	12.55	13.06	13.07	13.57	14.06
	8H	22.05	22.50	22.56	22.99	23.56	12.64	13.09	13.16	13.59	14.15