

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: P1056134

Luminaire Tested: S124R3DR-H1195D935-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056134
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-H1195D935-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

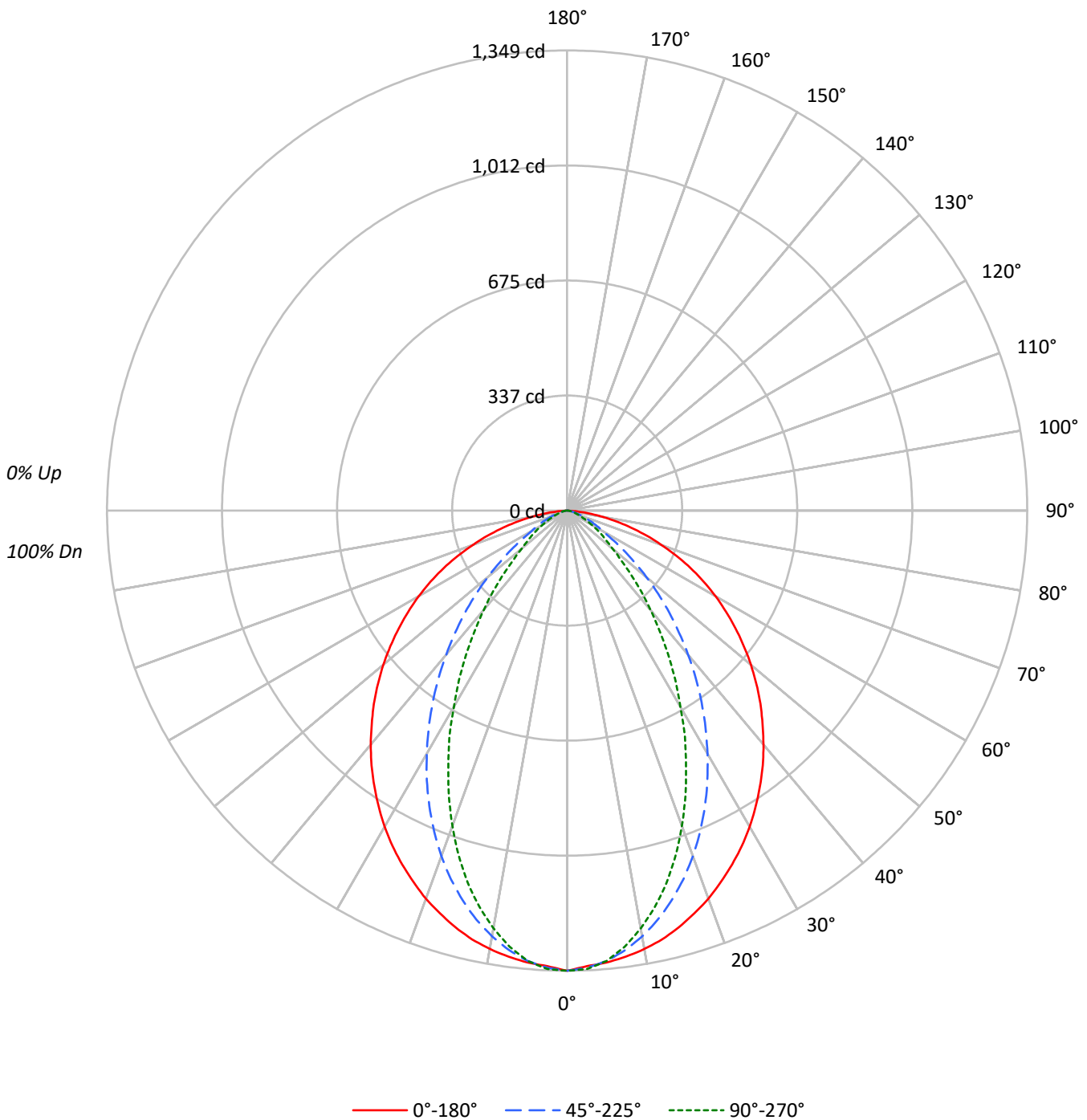
Lumens per Lamp: N/A
Luminaire Lumens: 2181.3 lumens
Efficiency: N/A
Efficacy: 59.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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	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°	11927	11927	11927
5°	11806	11761	11761
10°	11717	11378	11164
15°	11578	10830	10325
20°	11393	10140	9254
25°	11163	9325	8038
30°	10926	8399	6771
35°	10642	7416	5573
40°	10337	6364	4393
45°	10020	5293	3282
50°	9675	4164	2402
55°	9293	3078	1918
60°	8884	2133	1466
65°	8356	1655	1077
70°	7566	1168	845
75°	6607	816	642
80°	5310	642	575
85°	2932	507	507

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10020 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.1	5.7
10°-20°	334.3	15.3
20°-30°	445.9	20.4
30°-40°	449.0	20.6
40°-50°	368.2	16.9
50°-60°	251.7	11.5
60°-70°	140.6	6.4
70°-80°	55.8	2.6
80°-90°	10.6	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°	905.4	41.5
0°-40°	1354.4	62.1
0°-60°	1974.3	90.5
0°-90°	2181.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2181.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1349	1349	1349	1349	1349	
5°	1330	1345	1325	1319	1325	126
15°	1265	1251	1183	1142	1128	356
25°	1144	1088	956	859	824	527
35°	986	882	687	556	516	617
45°	801	654	423	298	262	618
55°	603	423	200	133	124	539
65°	399	201	79	56	52	395
75°	193	53	24	20	19	207
85°	29	5	5	5	5	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1349.0	1349.0	1349.0	1349.0	1349.0
2.5°	1336.5	1352.8	1341.5	1342.8	1345.3
5°	1330.2	1345.3	1325.2	1318.9	1325.2
7.5°	1318.9	1330.2	1300.1	1287.5	1290.0
10°	1305.1	1308.9	1267.4	1246.0	1243.5
12.5°	1287.5	1282.5	1228.5	1197.1	1189.5
15°	1264.9	1251.1	1183.2	1141.8	1128.0
17.5°	1238.5	1214.6	1133.0	1079.0	1058.9
20°	1210.9	1175.7	1077.7	1008.6	983.5
22.5°	1178.2	1134.3	1018.7	934.5	905.6
25°	1144.3	1087.8	955.9	859.2	824.0
27.5°	1109.1	1040.0	890.6	782.5	747.4
30°	1070.2	988.5	822.7	705.9	663.2
32.5°	1028.7	935.8	754.9	630.6	590.4
35°	986.0	881.8	687.1	556.4	516.3
37.5°	942.1	826.5	619.3	486.1	445.9
40°	895.6	770.0	551.4	419.5	380.6
42.5°	847.9	712.2	486.1	356.7	320.3
45°	801.4	654.4	423.3	297.7	262.5
47.5°	752.4	596.6	361.8	242.4	212.3
50°	703.4	538.9	302.7	194.7	174.6
52.5°	653.2	481.1	248.7	159.5	145.7
55°	602.9	423.3	199.7	133.1	124.4
57.5°	552.7	365.5	154.5	113.0	103.0
60°	502.4	309.0	120.6	91.7	82.9
62.5°	450.9	252.5	99.2	72.9	65.3
65°	399.4	201.0	79.1	56.5	51.5
67.5°	347.9	153.2	60.3	44.0	40.2
70°	292.7	109.3	45.2	33.9	32.7
72.5°	244.9	74.1	32.7	26.4	25.1
75°	193.4	52.8	23.9	20.1	18.8
77.5°	149.5	33.9	17.6	16.3	15.1
80°	104.3	18.8	12.6	11.3	11.3
82.5°	64.1	10.0	8.8	7.5	7.5
85°	28.9	5.0	5.0	5.0	5.0
87.5°	5.0	2.5	2.5	2.5	2.5
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	19.34	20.74	19.70	21.06	21.37	10.42	11.83	10.79	12.14	12.46
	3H	20.92	22.17	21.30	22.50	22.87	11.02	12.27	11.40	12.60	12.96
	4H	21.52	22.69	21.92	23.04	23.42	11.17	12.34	11.58	12.69	13.07
	6H	21.95	23.02	22.36	23.39	23.79	11.28	12.36	11.69	12.73	13.12
	8H	22.06	23.08	22.49	23.47	23.88	11.30	12.32	11.73	12.71	13.12
	12H	22.10	23.08	22.54	23.46	23.89	11.31	12.28	11.74	12.67	13.10
4H	2H	19.19	20.36	19.59	20.71	21.09	11.01	12.18	11.41	12.53	12.91
	3H	20.84	21.80	21.25	22.20	22.60	11.72	12.68	12.13	13.08	13.48
	4H	21.44	22.30	21.88	22.72	23.16	11.92	12.78	12.36	13.20	13.64
	6H	21.94	22.68	22.40	23.12	23.59	12.09	12.83	12.55	13.28	13.74
	8H	22.08	22.77	22.55	23.22	23.69	12.12	12.81	12.59	13.26	13.73
	12H	22.15	22.77	22.64	23.25	23.72	12.15	12.76	12.63	13.24	13.72
8H	4H	21.34	22.03	21.80	22.47	22.94	12.20	12.89	12.66	13.33	13.80
	6H	21.82	22.38	22.32	22.88	23.36	12.40	12.97	12.90	13.46	13.94
	8H	21.96	22.47	22.48	22.98	23.47	12.46	12.96	12.98	13.48	13.97
	12H	22.05	22.50	22.57	23.00	23.56	12.52	12.96	13.03	13.46	14.03
12H	4H	21.30	21.91	21.78	22.39	22.87	12.22	12.84	12.71	13.32	13.79
	6H	21.76	22.27	22.28	22.79	23.28	12.43	12.94	12.95	13.45	13.94
	8H	21.93	22.38	22.44	22.87	23.44	12.52	12.97	13.03	13.46	14.03