

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: P1055987

Luminaire Tested: S124R3DR-S1195D840-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055987
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-S1195D840-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, 80 CRI LEDS
Ballast/Driver: -

Summary

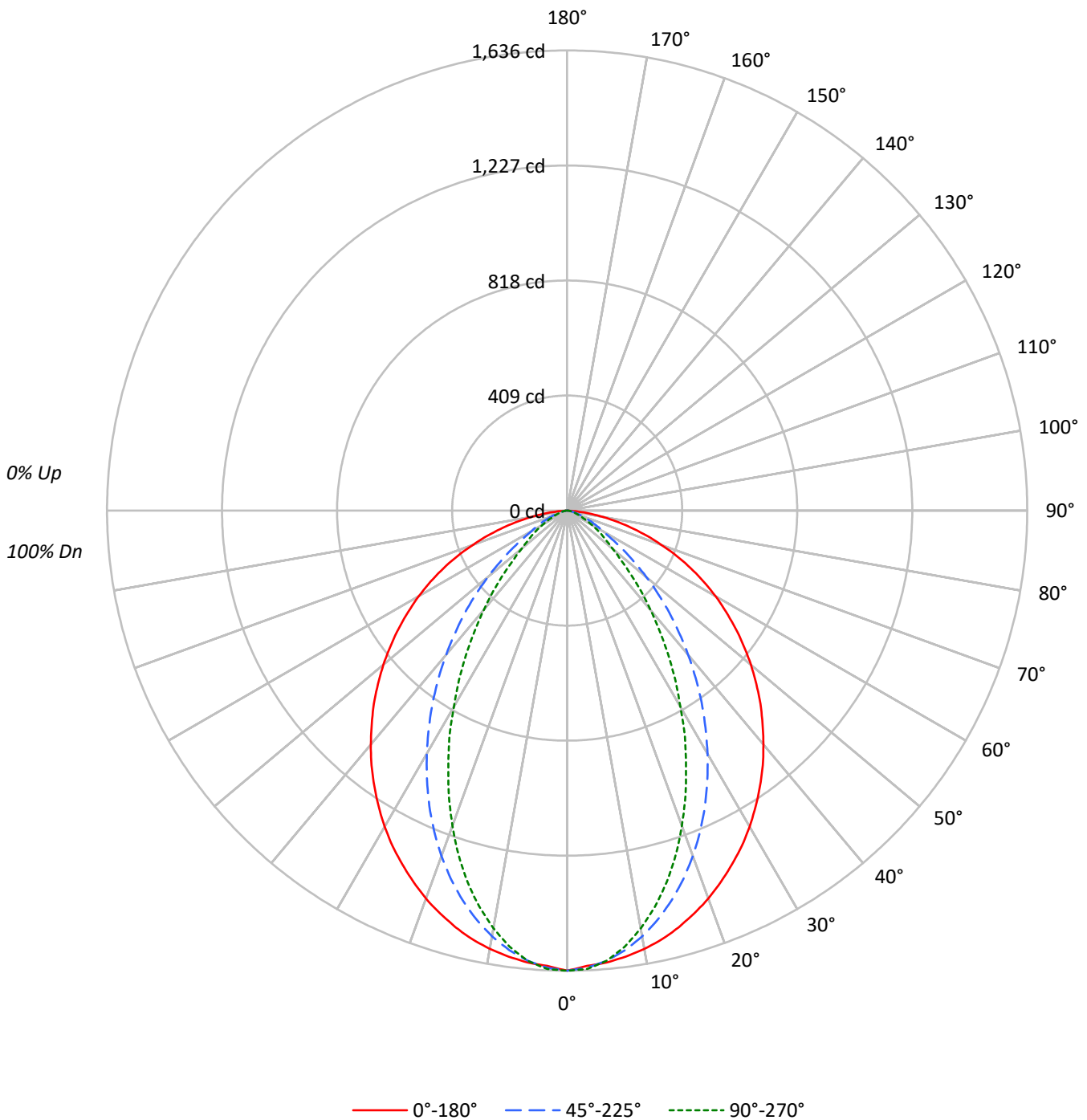
Lumens per Lamp: N/A
Luminaire Lumens: 2644.9 lumens
Efficiency: N/A
Efficacy: 63.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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°	14462	14462	14462
5°	14315	14261	14261
10°	14206	13796	13537
15°	14038	13132	12519
20°	13814	12295	11220
25°	13536	11306	9747
30°	13247	10185	8210
35°	12905	8992	6757
40°	12533	7717	5326
45°	12150	6418	3980
50°	11731	5049	2912
55°	11270	3733	2325
60°	10772	2585	1777
65°	10132	2008	1305
70°	9174	1417	1024
75°	8011	987	779
80°	6436	774	698
85°	3551	619	619

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12150 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.7	5.7
10°-20°	405.4	15.3
20°-30°	540.7	20.4
30°-40°	544.4	20.6
40°-50°	446.5	16.9
50°-60°	305.2	11.5
60°-70°	170.5	6.4
70°-80°	67.6	2.6
80°-90°	12.8	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°	1097.8	41.5
0°-40°	1642.3	62.1
0°-60°	2393.9	90.5
0°-90°	2644.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2644.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1636	1636	1636	1636	1636	
5°	1613	1631	1607	1599	1607	153
15°	1534	1517	1435	1384	1368	432
25°	1388	1319	1159	1042	999	639
35°	1196	1069	833	675	626	748
45°	972	794	513	361	318	749
55°	731	513	242	161	151	654
65°	484	244	96	68	62	479
75°	234	64	29	24	23	251
85°	35	6	6	6	6	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1635.7	1635.7	1635.7	1635.7	1635.7
2.5°	1620.5	1640.3	1626.6	1628.1	1631.2
5°	1612.9	1631.2	1606.8	1599.2	1606.8
7.5°	1599.2	1612.9	1576.3	1561.1	1564.2
10°	1582.4	1587.0	1536.7	1510.8	1507.8
12.5°	1561.1	1555.0	1489.5	1451.4	1442.3
15°	1533.7	1516.9	1434.7	1384.4	1367.7
17.5°	1501.7	1472.8	1373.8	1308.3	1283.9
20°	1468.2	1425.6	1306.8	1223.0	1192.5
22.5°	1428.6	1375.3	1235.2	1133.1	1098.1
25°	1387.5	1318.9	1159.0	1041.8	999.1
27.5°	1344.8	1261.1	1079.8	948.8	906.2
30°	1297.6	1198.6	997.6	855.9	804.2
32.5°	1247.4	1134.7	915.3	764.6	715.8
35°	1195.6	1069.2	833.1	674.7	626.0
37.5°	1142.3	1002.2	750.9	589.4	540.7
40°	1085.9	933.6	668.6	508.7	461.5
42.5°	1028.0	863.6	589.4	432.5	388.4
45°	971.7	793.5	513.3	361.0	318.3
47.5°	912.3	723.4	438.6	293.9	257.4
50°	852.9	653.4	367.1	236.1	211.7
52.5°	792.0	583.3	301.6	193.4	176.7
55°	731.1	513.3	242.2	161.4	150.8
57.5°	670.1	443.2	187.3	137.1	124.9
60°	609.2	374.7	146.2	111.2	100.5
62.5°	546.8	306.1	120.3	88.3	79.2
65°	484.3	243.7	96.0	68.5	62.4
67.5°	421.9	185.8	73.1	53.3	48.7
70°	354.9	132.5	54.8	41.1	39.6
72.5°	297.0	89.9	39.6	32.0	30.5
75°	234.5	64.0	28.9	24.4	22.8
77.5°	181.2	41.1	21.3	19.8	18.3
80°	126.4	22.8	15.2	13.7	13.7
82.5°	77.7	12.2	10.7	9.1	9.1
85°	35.0	6.1	6.1	6.1	6.1
87.5°	6.1	3.0	3.0	3.0	3.0
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	20.01	21.41	20.37	21.73	22.04	11.10	12.50	11.46	12.82	13.13
	3H	21.59	22.84	21.97	23.17	23.54	11.69	12.94	12.07	13.27	13.63
	4H	22.19	23.36	22.59	23.71	24.09	11.85	13.01	12.25	13.36	13.75
	6H	22.62	23.69	23.03	24.06	24.46	11.95	13.03	12.37	13.40	13.79
	8H	22.73	23.75	23.16	24.14	24.55	11.97	12.99	12.40	13.38	13.79
	12H	22.77	23.75	23.21	24.13	24.56	11.98	12.96	12.41	13.34	13.77
4H	2H	19.86	21.03	20.26	21.38	21.76	11.68	12.85	12.08	13.20	13.58
	3H	21.51	22.47	21.92	22.87	23.27	12.39	13.35	12.80	13.75	14.16
	4H	22.11	22.97	22.55	23.39	23.83	12.60	13.45	13.03	13.87	14.31
	6H	22.61	23.35	23.07	23.79	24.26	12.76	13.50	13.22	13.95	14.41
	8H	22.75	23.44	23.22	23.89	24.36	12.80	13.49	13.26	13.93	14.40
	12H	22.82	23.43	23.31	23.92	24.39	12.82	13.43	13.31	13.92	14.39
8H	4H	22.01	22.70	22.47	23.14	23.61	12.87	13.56	13.33	14.01	14.47
	6H	22.49	23.05	22.99	23.55	24.03	13.07	13.64	13.57	14.13	14.61
	8H	22.63	23.14	23.15	23.65	24.14	13.13	13.64	13.65	14.15	14.64
	12H	22.72	23.17	23.24	23.66	24.23	13.19	13.64	13.70	14.13	14.70
12H	4H	21.97	22.58	22.45	23.06	23.54	12.89	13.51	13.38	13.99	14.46
	6H	22.43	22.94	22.95	23.45	23.95	13.10	13.61	13.62	14.12	14.61
	8H	22.60	23.05	23.11	23.54	24.11	13.19	13.64	13.71	14.13	14.70