

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: P1056001

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056001
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-8)
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-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

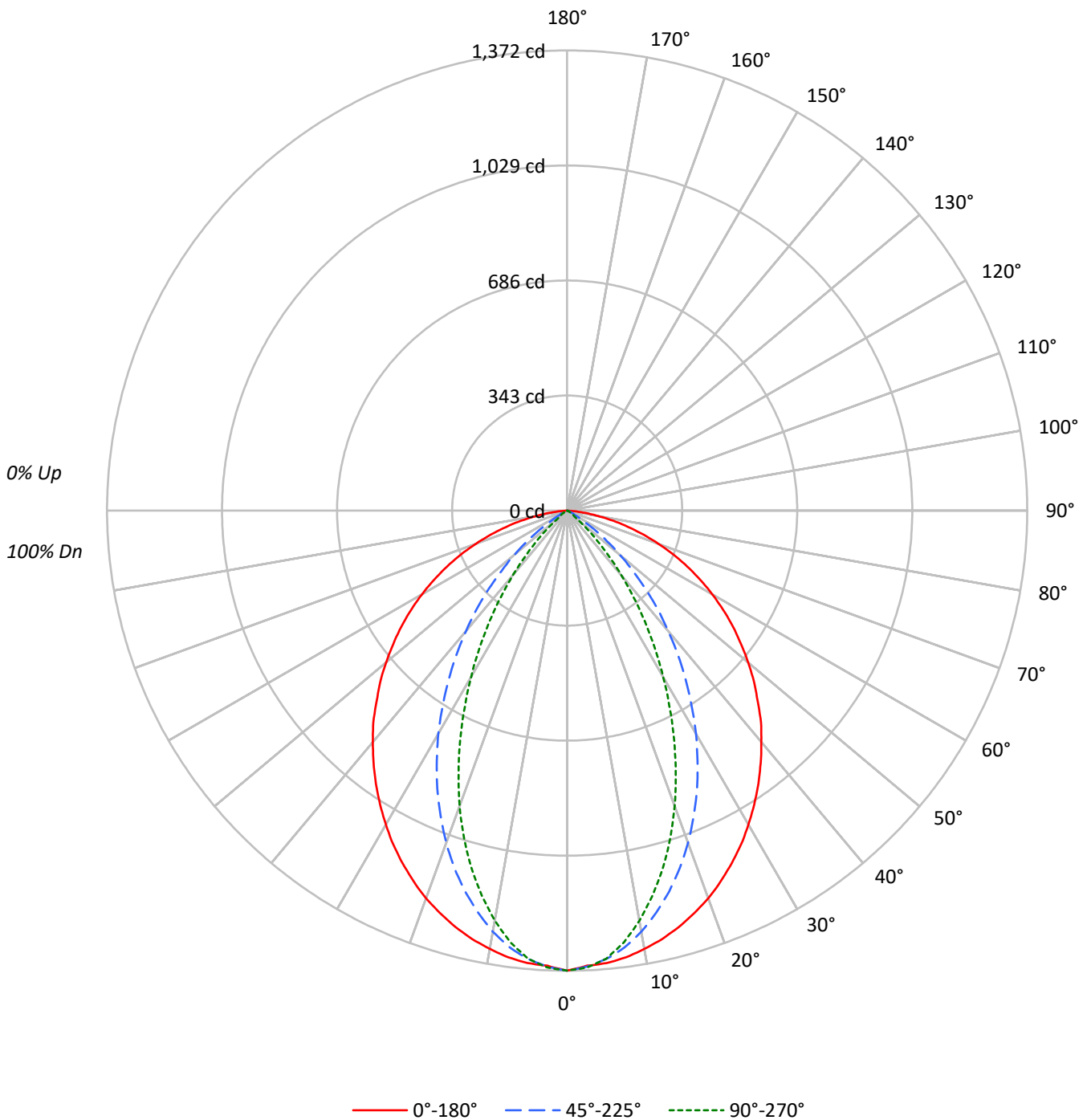
Lumens per Lamp: N/A
Luminaire Lumens: 1917.2 lumens
Efficiency: N/A
Efficacy: 45.8 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1056001

CATALOG NUMBER: S124R3DR-S1195D940-X4F0-XX-UDD-F-B

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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64
5	84	74	66	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54	52
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40
10	62	50	43	39	61	50	43	39	49	43	39	48	42	39	47	42	38	37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12128	12128	12128
5°	12019	11911	11900
10°	11917	11446	11144
15°	11768	10759	10094
20°	11578	9921	8820
25°	11322	8934	7360
30°	11038	7840	5849
35°	10726	6648	4355
40°	10399	5416	2903
45°	10039	4136	1598
50°	9693	2831	444
55°	9307	1534	290
60°	8847	476	166
65°	8272	310	84
70°	7473	140	34
75°	6432	44	0
80°	4862	0	0
85°	2049	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10039 cd/sqm



TEST NUMBER: P1056001

CATALOG NUMBER: S124R3DR-S1195D940-X4F0-XX-UDD-F-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.5	6.6
10°-20°	332.2	17.3
20°-30°	429.3	22.4
30°-40°	410.3	21.4
40°-50°	306.9	16.0
50°-60°	182.6	9.5
60°-70°	92.7	4.8
70°-80°	32.2	1.7
80°-90°	4.4	0.2
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
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0°-30°	888.1	46.3
0°-40°	1298.4	67.7
0°-60°	1787.9	93.3
0°-90°	1917.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1917.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1372	1372	1372	1372	1372	
5°	1354	1365	1342	1335	1341	128
15°	1286	1259	1175	1120	1103	362
25°	1161	1080	916	795	754	534
35°	994	857	616	459	404	621
45°	803	616	331	176	128	621
55°	604	375	100	23	19	539
65°	395	152	15	5	4	391
75°	188	20	1	1	0	200
85°	20	0	0	0	0	33
90°	0	0	0	0	0	



TEST NUMBER: P1056001

CATALOG NUMBER: S124R3DR-S1195D940-X4F0-XX-UDD-F-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1371.7	1371.7	1371.7	1371.7	1371.7
2.5°	1358.3	1374.4	1361.0	1362.3	1363.7
5°	1354.2	1365.0	1342.1	1335.4	1340.8
7.5°	1343.5	1347.5	1313.9	1296.4	1297.8
10°	1327.4	1323.3	1274.9	1245.3	1241.3
12.5°	1308.5	1295.1	1227.8	1184.8	1175.4
15°	1285.7	1258.8	1175.4	1120.2	1102.8
17.5°	1258.8	1219.8	1117.6	1044.9	1023.4
20°	1230.5	1176.7	1054.4	964.2	937.4
22.5°	1196.9	1128.3	985.8	879.5	845.9
25°	1160.6	1079.9	915.8	794.8	754.5
27.5°	1122.9	1027.5	841.9	708.7	661.7
30°	1081.2	972.3	767.9	621.3	572.9
32.5°	1038.2	915.8	691.2	540.6	486.8
35°	993.8	856.7	615.9	458.6	403.5
37.5°	948.1	797.5	543.3	380.6	324.1
40°	901.0	737.0	469.3	306.6	251.5
42.5°	855.3	676.5	399.4	236.7	185.6
45°	802.9	615.9	330.8	176.2	127.8
47.5°	755.8	556.8	264.9	119.7	75.3
50°	704.7	493.6	205.8	69.9	32.3
52.5°	653.6	434.4	150.6	30.9	24.2
55°	603.8	375.2	99.5	22.9	18.8
57.5°	551.4	316.0	53.8	17.5	13.4
60°	500.3	258.2	26.9	13.4	9.4
62.5°	447.8	203.1	21.5	8.1	5.4
65°	395.4	152.0	14.8	5.4	4.0
67.5°	342.9	103.6	9.4	2.7	1.3
70°	289.1	63.2	5.4	1.3	1.3
72.5°	238.0	32.3	2.7	1.3	1.3
75°	188.3	20.2	1.3	1.3	0.0
77.5°	139.9	10.8	1.3	1.3	0.0
80°	95.5	4.0	0.0	0.0	0.0
82.5°	55.1	1.3	0.0	0.0	0.0
85°	20.2	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1056001

CATALOG NUMBER: S124R3DR-S1195D940-X4F0-XX-UDD-F-B

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	19.12	20.45	19.49	20.77	21.08	0.00	0.00	0.00	0.00	0.00
	3H	20.67	21.84	21.05	22.17	22.54	0.00	0.00	0.00	0.00	0.00
	4H	21.26	22.36	21.66	22.71	23.09	0.00	0.00	0.00	0.00	0.00
	6H	21.68	22.68	22.09	23.06	23.45	0.00	0.00	0.00	0.00	0.00
	8H	21.78	22.73	22.21	23.12	23.53	0.00	0.00	0.00	0.00	0.00
	12H	21.80	22.71	22.23	23.09	23.52	0.00	0.00	0.00	0.00	0.00
4H	2H	18.90	20.00	19.31	20.35	20.73	0.00	0.00	0.00	0.22	0.61
	3H	20.47	21.36	20.88	21.76	22.17	0.00	0.00	0.00	0.04	0.44
	4H	21.05	21.85	21.48	22.27	22.71	0.00	0.00	0.00	0.00	0.34
	6H	21.51	22.20	21.97	22.64	23.11	0.00	0.00	0.00	0.00	0.21
	8H	21.63	22.27	22.10	22.72	23.19	0.00	0.00	0.00	0.00	0.12
	12H	21.67	22.24	22.16	22.72	23.19	0.00	0.00	0.00	0.00	0.04
8H	4H	20.91	21.55	21.38	22.00	22.47	0.42	1.06	0.89	1.51	1.98
	6H	21.35	21.88	21.86	22.37	22.85	0.33	0.85	0.83	1.35	1.83
	8H	21.47	21.94	21.99	22.45	22.95	0.27	0.73	0.79	1.25	1.74
	12H	21.52	21.93	22.04	22.43	23.00	0.22	0.63	0.74	1.13	1.70
12H	4H	20.87	21.43	21.35	21.92	22.39	0.83	1.40	1.32	1.88	2.35
	6H	21.29	21.76	21.81	22.28	22.77	0.72	1.19	1.25	1.71	2.20
	8H	21.43	21.84	21.94	22.33	22.91	0.68	1.09	1.20	1.59	2.16