

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: P1056136

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056136
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-H1195D940-X4F0-XX-UDD-F-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

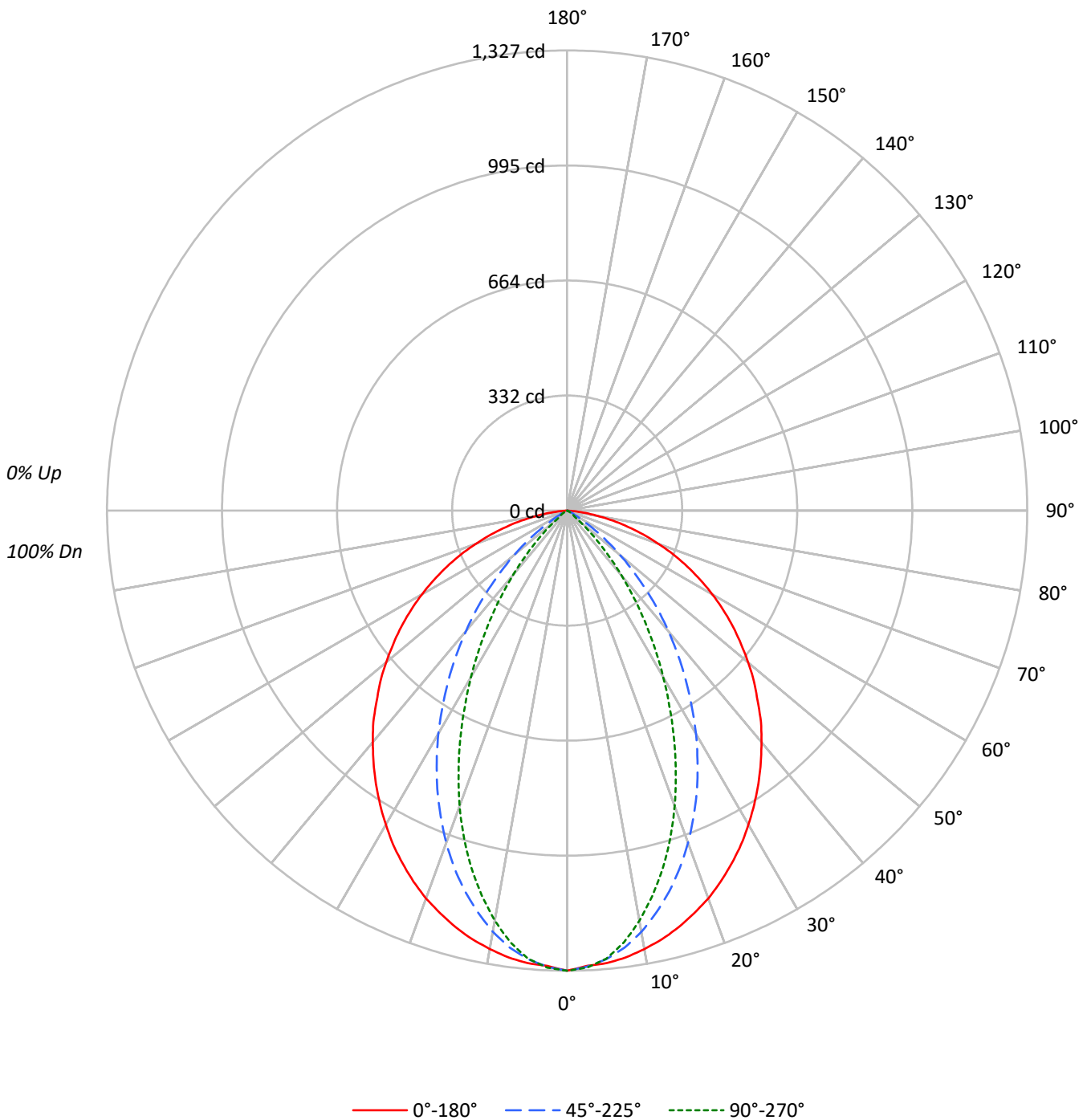
Lumens per Lamp: N/A
Luminaire Lumens: 1854.6 lumens
Efficiency: N/A
Efficacy: 50.7 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
Input Voltage (V): 120
Input Current (Ain): 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: P1056136

CATALOG NUMBER: S124R3DR-H1195D940-X4F0-XX-UDD-F-B

Luminous Intensity Polar Plot





TEST NUMBER: P1056136

CATALOG NUMBER: S124R3DR-H1195D940-X4F0-XX-UDD-F-B

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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90					90			
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80					80			
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71					71			
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64					64			
5	84	74	66	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57					57			
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54	52					52			
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47					47			
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43					43			
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40					40			
10	62	50	43	39	61	50	43	39	49	43	39	48	42	39	47	42	38	37					37			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11732	11732	11732
5°	11626	11523	11511
10°	11527	11072	10780
15°	11384	10407	9764
20°	11199	9596	8531
25°	10952	8642	7119
30°	10678	7583	5658
35°	10377	6431	4213
40°	10060	5240	2808
45°	9710	4001	1545
50°	9377	2737	429
55°	9004	1484	281
60°	8557	460	161
65°	8002	299	82
70°	7230	134	34
75°	6221	44	0
80°	4705	0	0
85°	1978	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9710 cd/sqm



TEST NUMBER: P1056136

CATALOG NUMBER: S124R3DR-H1195D940-X4F0-XX-UDD-F-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.4	6.6
10°-20°	321.4	17.3
20°-30°	415.3	22.4
30°-40°	396.9	21.4
40°-50°	296.8	16.0
50°-60°	176.7	9.5
60°-70°	89.7	4.8
70°-80°	31.2	1.7
80°-90°	4.3	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
0°-30°	859.1	46.3
0°-40°	1256.0	67.7
0°-60°	1729.5	93.3
0°-90°	1854.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1854.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1327	1327	1327	1327	1327	
5°	1310	1320	1298	1292	1297	124
15°	1244	1218	1137	1084	1067	350
25°	1123	1045	886	769	730	517
35°	961	829	596	444	390	601
45°	777	596	320	170	124	600
55°	584	363	96	22	18	521
65°	382	147	14	5	4	378
75°	182	20	1	1	0	193
85°	20	0	0	0	0	32
90°	0	0	0	0	0	



TEST NUMBER: P1056136

CATALOG NUMBER: S124R3DR-H1195D940-X4F0-XX-UDD-F-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1326.9	1326.9	1326.9	1326.9	1326.9
2.5°	1313.9	1329.5	1316.5	1317.8	1319.1
5°	1310.0	1320.4	1298.3	1291.8	1297.0
7.5°	1299.6	1303.5	1271.0	1254.1	1255.4
10°	1284.0	1280.1	1233.3	1204.6	1200.7
12.5°	1265.8	1252.8	1187.7	1146.1	1137.0
15°	1243.7	1217.6	1137.0	1083.6	1066.7
17.5°	1217.6	1179.9	1081.0	1010.8	990.0
20°	1190.3	1138.3	1019.9	932.7	906.7
22.5°	1157.8	1091.5	953.6	850.8	818.3
25°	1122.7	1044.6	885.9	768.8	729.8
27.5°	1086.3	993.9	814.4	685.6	640.0
30°	1045.9	940.6	742.8	601.0	554.2
32.5°	1004.3	885.9	668.7	523.0	470.9
35°	961.4	828.7	595.8	443.6	390.3
37.5°	917.1	771.4	525.6	368.2	313.5
40°	871.6	712.9	454.0	296.6	243.3
42.5°	827.4	654.4	386.4	229.0	179.5
45°	776.6	595.8	320.0	170.4	123.6
47.5°	731.1	538.6	256.3	115.8	72.9
50°	681.7	477.4	199.0	67.6	31.2
52.5°	632.2	420.2	145.7	29.9	23.4
55°	584.1	363.0	96.3	22.1	18.2
57.5°	533.4	305.7	52.0	16.9	13.0
60°	483.9	249.8	26.0	13.0	9.1
62.5°	433.2	196.4	20.8	7.8	5.2
65°	382.5	147.0	14.3	5.2	3.9
67.5°	331.7	100.2	9.1	2.6	1.3
70°	279.7	61.1	5.2	1.3	1.3
72.5°	230.3	31.2	2.6	1.3	1.3
75°	182.1	19.5	1.3	1.3	0.0
77.5°	135.3	10.4	1.3	1.3	0.0
80°	92.4	3.9	0.0	0.0	0.0
82.5°	53.3	1.3	0.0	0.0	0.0
85°	19.5	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: P1056136

CATALOG NUMBER: S124R3DR-H1195D940-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	19.01	20.34	19.37	20.65	20.97	0.00	0.00	0.00	0.00	0.00
	3H	20.55	21.73	20.93	22.06	22.42	0.00	0.00	0.00	0.00	0.00
	4H	21.15	22.24	21.55	22.59	22.98	0.00	0.00	0.00	0.00	0.00
	6H	21.56	22.57	21.98	22.94	23.33	0.00	0.00	0.00	0.00	0.00
	8H	21.66	22.61	22.09	23.01	23.41	0.00	0.00	0.00	0.00	0.00
	12H	21.68	22.59	22.11	22.97	23.40	0.00	0.00	0.00	0.00	0.00
4H	2H	18.79	19.88	19.19	20.23	20.62	0.00	0.00	0.00	0.10	0.48
	3H	20.35	21.24	20.76	21.65	22.05	0.00	0.00	0.00	0.00	0.32
	4H	20.93	21.73	21.37	22.15	22.59	0.00	0.00	0.00	0.00	0.23
	6H	21.39	22.08	21.86	22.53	22.99	0.00	0.00	0.00	0.00	0.10
	8H	21.51	22.16	21.98	22.60	23.07	0.00	0.00	0.00	0.00	0.00
	12H	21.55	22.12	22.04	22.60	23.08	0.00	0.00	0.00	0.00	0.00
8H	4H	20.80	21.44	21.27	21.89	22.36	0.30	0.94	0.77	1.39	1.86
	6H	21.24	21.76	21.74	22.26	22.74	0.21	0.73	0.71	1.23	1.71
	8H	21.36	21.82	21.88	22.34	22.83	0.15	0.62	0.67	1.13	1.62
	12H	21.40	21.82	21.92	22.31	22.88	0.10	0.52	0.62	1.01	1.58
12H	4H	20.75	21.32	21.24	21.80	22.28	0.71	1.28	1.20	1.76	2.24
	6H	21.18	21.65	21.70	22.16	22.65	0.61	1.07	1.13	1.59	2.08
	8H	21.31	21.72	21.83	22.22	22.79	0.56	0.98	1.08	1.47	2.04