

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055959

Luminaire Tested: S124R3DR-S1020D840-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055959
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-S1020D840-X4F0-XX-UDD-FLL-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

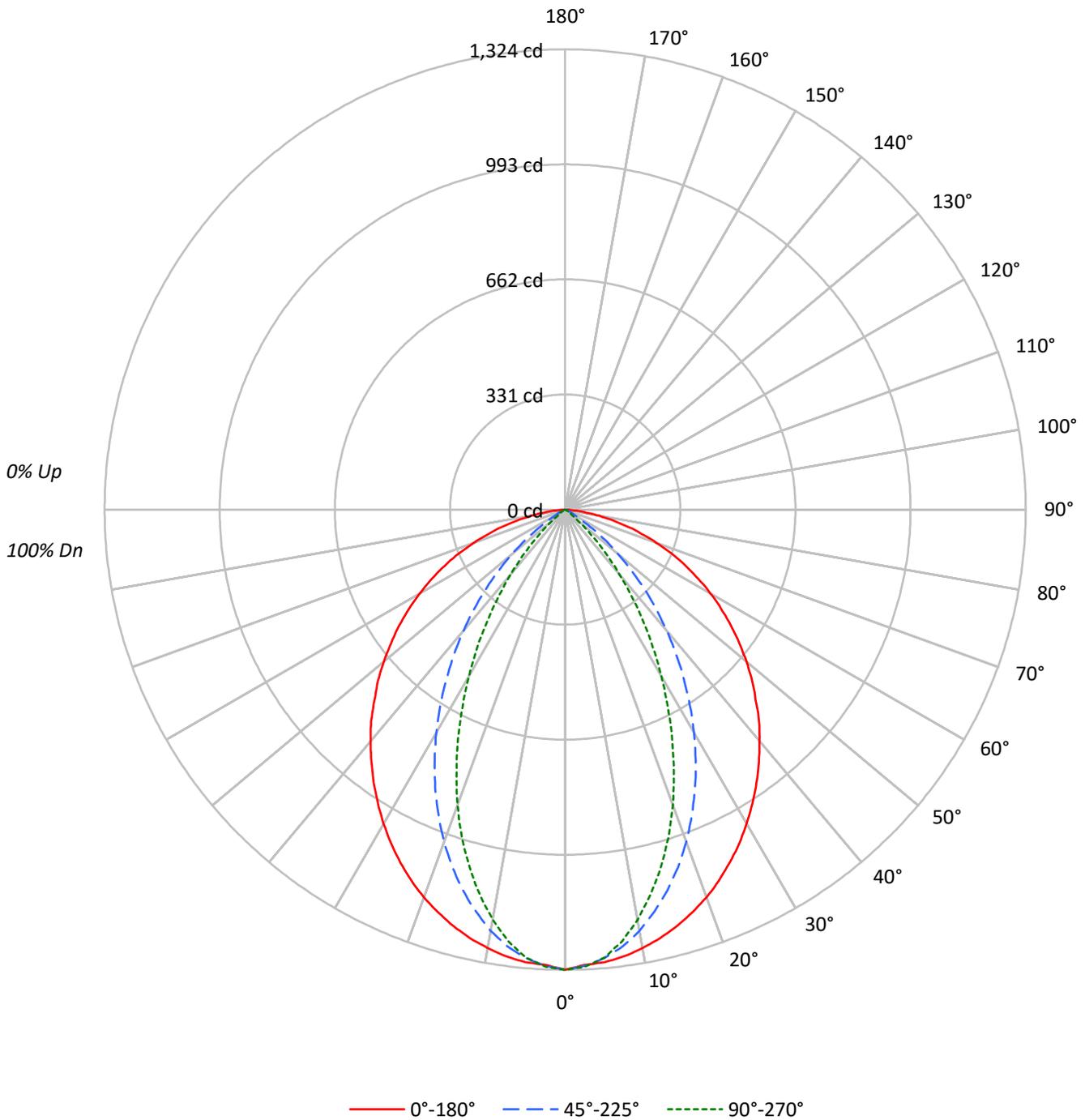
Lumens per Lamp: N/A
Luminaire Lumens: 1850.1 lumens
Efficiency: N/A
Efficacy: 53.3 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
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: P1055959

CATALOG NUMBER: S124R3DR-S1020D840-X4F0-XX-UDD-FLL-B

Luminous Intensity Polar Plot





TEST NUMBER: P1055959

CATALOG NUMBER: S124R3DR-S1020D840-X4F0-XX-UDD-FLL-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	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°	11703	11703	11703
5°	11598	11494	11483
10°	11500	11045	10754
15°	11356	10382	9740
20°	11172	9573	8510
25°	10926	8622	7102
30°	10652	7565	5644
35°	10351	6416	4202
40°	10035	5227	2801
45°	9688	3991	1542
50°	9353	2732	428
55°	8982	1480	281
60°	8537	460	161
65°	7981	299	82
70°	7212	134	34
75°	6207	44	0
80°	4689	0	0
85°	1978	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9688 cd/sqm



TEST NUMBER: P1055959

CATALOG NUMBER: S124R3DR-S1020D840-X4F0-XX-UDD-FLL-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.1	6.6
10°-20°	320.6	17.3
20°-30°	414.3	22.4
30°-40°	396.0	21.4
40°-50°	296.1	16.0
50°-60°	176.2	9.5
60°-70°	89.5	4.8
70°-80°	31.1	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°	857.0	46.3
0°-40°	1252.9	67.7
0°-60°	1725.3	93.3
0°-90°	1850.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1850.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1324	1324	1324	1324	1324	
5°	1307	1317	1295	1289	1294	124
15°	1241	1215	1134	1081	1064	350
25°	1120	1042	884	767	728	516
35°	959	827	594	442	389	600
45°	775	594	319	170	123	599
55°	583	362	96	22	18	520
65°	382	147	14	5	4	377
75°	182	20	1	1	0	193
85°	20	0	0	0	0	32
90°	0	0	0	0	0	



TEST NUMBER: P1055959

CATALOG NUMBER: S124R3DR-S1020D840-X4F0-XX-UDD-FLL-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1323.7	1323.7	1323.7	1323.7	1323.7
2.5°	1310.7	1326.3	1313.3	1314.6	1315.9
5°	1306.8	1317.2	1295.1	1288.7	1293.8
7.5°	1296.4	1300.3	1267.9	1251.0	1252.3
10°	1280.9	1277.0	1230.3	1201.7	1197.8
12.5°	1262.7	1249.7	1184.8	1143.3	1134.2
15°	1240.6	1214.7	1134.2	1081.0	1064.1
17.5°	1214.7	1177.1	1078.4	1008.3	987.6
20°	1187.4	1135.5	1017.4	930.5	904.5
22.5°	1155.0	1088.8	951.2	848.7	816.3
25°	1120.0	1042.1	883.8	767.0	728.0
27.5°	1083.6	991.5	812.4	683.9	638.5
30°	1043.4	938.3	741.0	599.6	552.8
32.5°	1001.9	883.8	667.0	521.7	469.8
35°	959.0	826.7	594.4	442.5	389.3
37.5°	914.9	769.6	524.3	367.3	312.8
40°	869.5	711.2	452.9	295.9	242.7
42.5°	825.4	652.8	385.4	228.4	179.1
45°	774.8	594.4	319.2	170.0	123.3
47.5°	729.3	537.3	255.7	115.5	72.7
50°	680.0	476.3	198.6	67.5	31.1
52.5°	630.7	419.2	145.3	29.8	23.4
55°	582.7	362.1	96.0	22.1	18.2
57.5°	532.1	305.0	51.9	16.9	13.0
60°	482.8	249.2	26.0	13.0	9.1
62.5°	432.1	196.0	20.8	7.8	5.2
65°	381.5	146.6	14.3	5.2	3.9
67.5°	330.9	99.9	9.1	2.6	1.3
70°	279.0	61.0	5.2	1.3	1.3
72.5°	229.7	31.1	2.6	1.3	1.3
75°	181.7	19.5	1.3	1.3	0.0
77.5°	135.0	10.4	1.3	1.3	0.0
80°	92.1	3.9	0.0	0.0	0.0
82.5°	53.2	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

(END OF REPORT)