

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P1056219

Luminaire Tested: S124R3DR-H795D940-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056219
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-7)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-H795D940-X4F0-XX-UDD-FLL-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

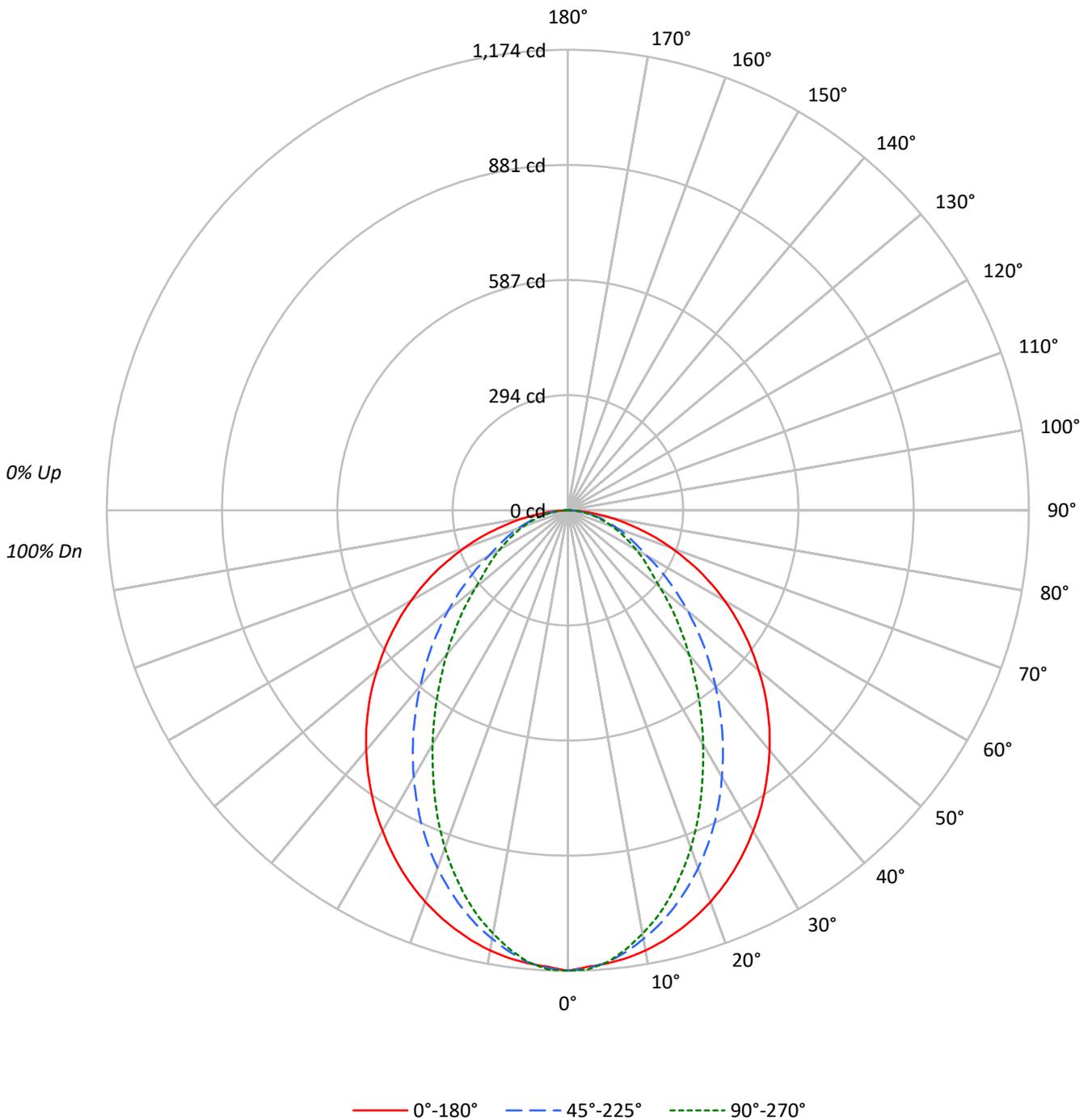
Lumens per Lamp: N/A
Luminaire Lumens: 2337.3 lumens
Efficiency: N/A
Efficacy: 98.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
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: P1056219

CATALOG NUMBER: S124R3DR-H795D940-X4F0-XX-UDD-FLL-W

Luminous Intensity Polar Plot





TEST NUMBER: P1056219

CATALOG NUMBER: S124R3DR-H795D940-X4F0-XX-UDD-FLL-W

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	110	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76	73
3	93	83	75	69	90	81	74	69	79	73	68	76	71	67	73	69	65	63
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39
8	64	51	43	38	62	51	43	38	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10375	10375	10375
5°	10293	10269	10261
10°	10233	9962	9838
15°	10125	9587	9295
20°	9993	9132	8620
25°	9830	8609	7835
30°	9635	8013	7035
35°	9432	7391	6263
40°	9218	6747	5541
45°	8994	6122	4869
50°	8718	5463	4205
55°	8452	4805	3820
60°	8154	4122	3542
65°	7787	3738	3305
70°	7233	3459	3125
75°	6549	3187	2951
80°	5718	2948	2770
85°	4382	2719	2536

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8994 cd/sqm



TEST NUMBER: P1056219

CATALOG NUMBER: S124R3DR-H795D940-X4F0-XX-UDD-FLL-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.3	4.7
10°-20°	296.4	12.7
20°-30°	410.3	17.6
30°-40°	440.4	18.8
40°-50°	400.5	17.1
50°-60°	315.4	13.5
60°-70°	215.9	9.2
70°-80°	116.2	5.0
80°-90°	32.9	1.4
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°	816.0	34.9
0°-40°	1256.4	53.8
0°-60°	1972.3	84.4
0°-90°	2337.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2337.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1174	1174	1174	1174	1174	
5°	1160	1173	1157	1151	1156	110
15°	1106	1094	1047	1019	1016	312
25°	1008	966	882	819	803	464
35°	874	806	685	602	580	547
45°	719	628	490	405	389	555
55°	548	444	312	251	248	490
65°	372	266	179	159	158	367
75°	192	117	93	86	86	205
85°	43	29	27	25	25	52
90°	0	0	0	0	0	



TEST NUMBER: P1056219

CATALOG NUMBER: S124R3DR-H795D940-X4F0-XX-UDD-FLL-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1173.5	1173.5	1173.5	1173.5	1173.5
2.5°	1164.9	1178.7	1168.3	1170.1	1171.8
5°	1159.7	1172.6	1157.1	1151.1	1156.2
7.5°	1151.1	1159.7	1135.5	1124.3	1129.5
10°	1139.8	1141.6	1109.6	1093.2	1095.8
12.5°	1124.3	1120.0	1081.1	1057.8	1059.5
15°	1106.2	1094.1	1047.4	1018.9	1015.5
17.5°	1085.4	1065.6	1010.3	974.0	967.1
20°	1062.1	1035.3	970.6	924.0	916.2
22.5°	1036.2	1001.7	927.4	872.1	860.9
25°	1007.7	966.3	882.5	818.6	803.1
27.5°	976.6	928.3	834.1	764.2	744.3
30°	943.8	888.5	784.9	709.8	689.1
32.5°	910.1	848.0	734.8	655.4	633.8
35°	873.9	805.7	684.8	601.9	580.3
37.5°	836.7	761.6	633.8	550.1	527.6
40°	798.7	717.6	584.6	498.2	480.1
42.5°	759.9	672.7	536.2	449.9	433.5
45°	719.3	627.8	489.6	405.0	389.4
47.5°	677.9	582.0	442.1	362.7	348.0
50°	633.8	536.2	397.2	321.2	305.7
52.5°	591.5	489.6	354.0	280.6	272.9
55°	548.3	443.8	311.7	251.3	247.8
57.5°	505.2	398.1	272.9	228.0	224.5
60°	461.1	353.2	233.1	203.8	200.3
62.5°	417.1	309.1	203.8	180.5	178.7
65°	372.2	266.0	178.7	158.9	158.0
67.5°	324.7	224.5	156.3	139.9	139.0
70°	279.8	183.1	133.8	120.9	120.9
72.5°	237.5	145.1	113.1	102.8	102.8
75°	191.7	116.6	93.3	85.5	86.4
77.5°	151.1	91.5	75.1	69.9	69.9
80°	112.3	68.2	57.9	53.5	54.4
82.5°	76.0	47.5	41.4	38.9	38.9
85°	43.2	29.4	26.8	25.0	25.0
87.5°	15.5	13.8	13.0	11.2	12.1
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1056219
 CATALOG NUMBER: S124R3DR-H795D940-X4F0-XX-UDD-FLL-W

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	19.27	20.79	19.63	21.11	21.42	15.05	16.57	15.41	16.89	17.20
	3H	21.05	22.42	21.42	22.74	23.10	16.66	18.03	17.04	18.36	18.72
	4H	21.72	23.00	22.12	23.35	23.73	17.29	18.58	17.69	18.93	19.30
	6H	22.23	23.41	22.64	23.78	24.17	17.79	18.98	18.20	19.34	19.74
	8H	22.39	23.52	22.82	23.91	24.31	17.96	19.09	18.39	19.48	19.88
	12H	22.49	23.57	22.92	23.95	24.38	18.08	19.17	18.51	19.55	19.98
4H	2H	19.37	20.65	19.76	21.00	21.38	15.77	17.05	16.17	17.40	17.78
	3H	21.31	22.38	21.72	22.78	23.18	17.57	18.64	17.98	19.04	19.44
	4H	22.07	23.03	22.50	23.44	23.88	18.31	19.27	18.74	19.69	20.13
	6H	22.70	23.54	23.16	23.98	24.44	18.93	19.77	19.38	20.21	20.67
	8H	22.92	23.70	23.38	24.15	24.62	19.14	19.93	19.61	20.37	20.84
	12H	23.07	23.78	23.56	24.25	24.73	19.31	20.01	19.79	20.49	20.96
8H	4H	22.12	22.91	22.59	23.35	23.82	18.70	19.48	19.16	19.93	20.40
	6H	22.82	23.47	23.32	23.96	24.44	19.43	20.08	19.93	20.57	21.05
	8H	23.09	23.67	23.60	24.18	24.67	19.72	20.30	20.23	20.81	21.30
	12H	23.31	23.82	23.82	24.32	24.88	19.96	20.48	20.47	20.97	21.54
12H	4H	22.11	22.82	22.60	23.29	23.77	18.75	19.46	19.24	19.93	20.41
	6H	22.81	23.40	23.33	23.91	24.40	19.51	20.10	20.03	20.61	21.09
	8H	23.12	23.64	23.63	24.13	24.69	19.86	20.38	20.37	20.87	21.43