

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: P1056222

Luminaire Tested: S124R3DR-H795D950-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056222
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-H795D950-X4F0-XX-UDD-FLL-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

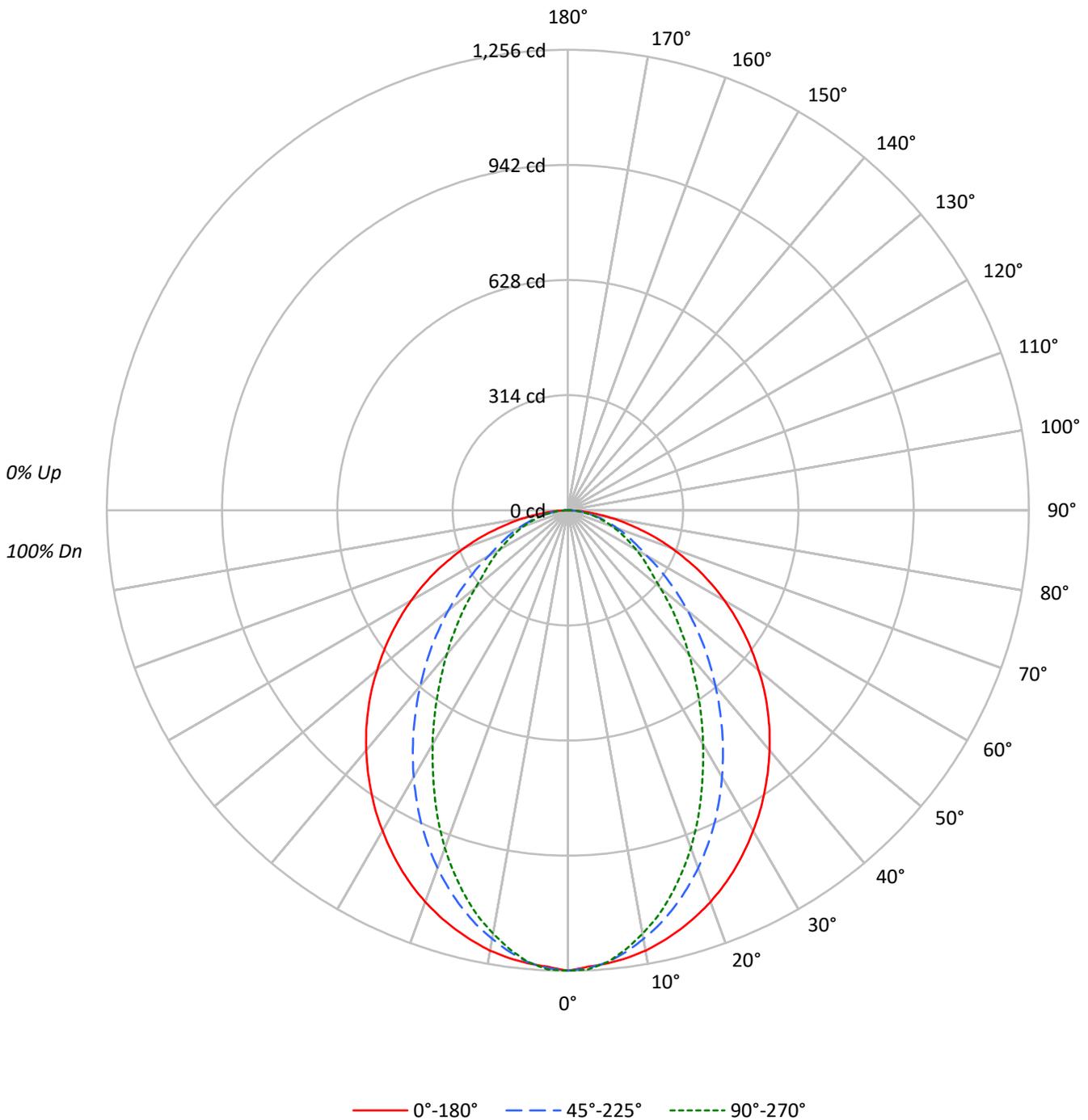
Lumens per Lamp: N/A
Luminaire Lumens: 2500.6 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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

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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	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°	11100	11100	11100
5°	11011	10987	10979
10°	10948	10658	10525
15°	10832	10257	9944
20°	10691	9770	9223
25°	10517	9211	8382
30°	10308	8574	7526
35°	10091	7907	6700
40°	9862	7218	5928
45°	9622	6549	5209
50°	9327	5846	4498
55°	9042	5141	4086
60°	8723	4410	3789
65°	8331	4000	3538
70°	7737	3702	3342
75°	7006	3409	3156
80°	6115	3152	2963
85°	4687	2901	2719

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9622 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.9	4.7
10°-20°	317.1	12.7
20°-30°	439.0	17.6
30°-40°	471.2	18.8
40°-50°	428.5	17.1
50°-60°	337.4	13.5
60°-70°	231.0	9.2
70°-80°	124.3	5.0
80°-90°	35.2	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°	873.0	34.9
0°-40°	1344.2	53.8
0°-60°	2110.1	84.4
0°-90°	2500.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2500.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1256	1256	1256	1256	1256	
5°	1241	1255	1238	1232	1237	118
15°	1183	1170	1121	1090	1086	334
25°	1078	1034	944	876	859	496
35°	935	862	733	644	621	585
45°	770	672	524	433	417	593
55°	587	475	334	269	265	524
65°	398	284	191	170	169	393
75°	205	125	100	92	92	219
85°	46	31	29	27	27	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1255.5	1255.5	1255.5	1255.5	1255.5
2.5°	1246.2	1261.0	1249.9	1251.8	1253.6
5°	1240.7	1254.6	1237.9	1231.5	1237.0
7.5°	1231.5	1240.7	1214.8	1202.8	1208.4
10°	1219.5	1221.3	1187.1	1169.6	1172.3
12.5°	1202.8	1198.2	1156.6	1131.7	1133.5
15°	1183.4	1170.5	1120.6	1090.1	1086.4
17.5°	1161.3	1140.0	1080.9	1042.1	1034.7
20°	1136.3	1107.7	1038.4	988.5	980.2
22.5°	1108.6	1071.6	992.2	933.1	921.1
25°	1078.1	1033.8	944.2	875.8	859.2
27.5°	1044.8	993.1	892.4	817.6	796.3
30°	1009.7	950.6	839.8	759.4	737.2
32.5°	973.7	907.2	786.2	701.2	678.1
35°	934.9	861.9	732.6	643.9	620.8
37.5°	895.2	814.8	678.1	588.5	564.5
40°	854.5	767.7	625.4	533.0	513.6
42.5°	813.0	719.7	573.7	481.3	463.8
45°	769.5	671.6	523.8	433.3	416.6
47.5°	725.2	622.7	473.0	388.0	372.3
50°	678.1	573.7	425.0	343.7	327.0
52.5°	632.8	523.8	378.8	300.2	291.9
55°	586.6	474.8	333.5	268.8	265.1
57.5°	540.4	425.9	291.9	243.9	240.2
60°	493.3	377.8	249.4	218.0	214.3
62.5°	446.2	330.7	218.0	193.1	191.2
65°	398.2	284.5	191.2	170.0	169.1
67.5°	347.4	240.2	167.2	149.7	148.7
70°	299.3	195.9	143.2	129.3	129.3
72.5°	254.1	155.2	121.0	109.9	109.9
75°	205.1	124.7	99.8	91.5	92.4
77.5°	161.7	97.9	80.4	74.8	74.8
80°	120.1	73.0	61.9	57.3	58.2
82.5°	81.3	50.8	44.3	41.6	41.6
85°	46.2	31.4	28.6	26.8	26.8
87.5°	16.6	14.8	13.9	12.0	12.9
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	19.50	21.03	19.87	21.34	21.66	15.28	16.81	15.65	17.12	17.43
	3H	21.28	22.65	21.66	22.98	23.34	16.89	18.26	17.27	18.59	18.95
	4H	21.95	23.24	22.35	23.59	23.96	17.52	18.81	17.92	19.16	19.54
	6H	22.46	23.65	22.87	24.02	24.41	18.02	19.21	18.44	19.58	19.97
	8H	22.62	23.76	23.05	24.15	24.55	18.19	19.33	18.62	19.72	20.12
	12H	22.72	23.81	23.15	24.19	24.62	18.32	19.40	18.75	19.78	20.21
4H	2H	19.60	20.89	20.00	21.23	21.61	16.00	17.29	16.40	17.63	18.01
	3H	21.54	22.61	21.95	23.01	23.41	17.81	18.88	18.22	19.28	19.68
	4H	22.30	23.26	22.73	23.68	24.12	18.54	19.51	18.98	19.92	20.36
	6H	22.94	23.77	23.39	24.22	24.68	19.16	20.00	19.62	20.44	20.90
	8H	23.15	23.94	23.62	24.38	24.85	19.38	20.16	19.84	20.61	21.07
	12H	23.31	24.01	23.79	24.49	24.96	19.54	20.25	20.03	20.72	21.19
8H	4H	22.36	23.14	22.82	23.59	24.05	18.93	19.72	19.40	20.16	20.63
	6H	23.06	23.71	23.55	24.20	24.67	19.67	20.31	20.16	20.81	21.28
	8H	23.32	23.91	23.84	24.42	24.90	19.95	20.54	20.47	21.05	21.53
	12H	23.54	24.06	24.05	24.55	25.11	20.20	20.71	20.71	21.21	21.77
12H	4H	22.35	23.05	22.83	23.53	24.00	18.99	19.69	19.47	20.17	20.64
	6H	23.05	23.63	23.56	24.14	24.63	19.75	20.33	20.26	20.84	21.33
	8H	23.36	23.87	23.87	24.37	24.93	20.10	20.61	20.61	21.10	21.67