

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: P1056084

Luminaire Tested: S124R3DR-S795D940-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056084
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-S795D940-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

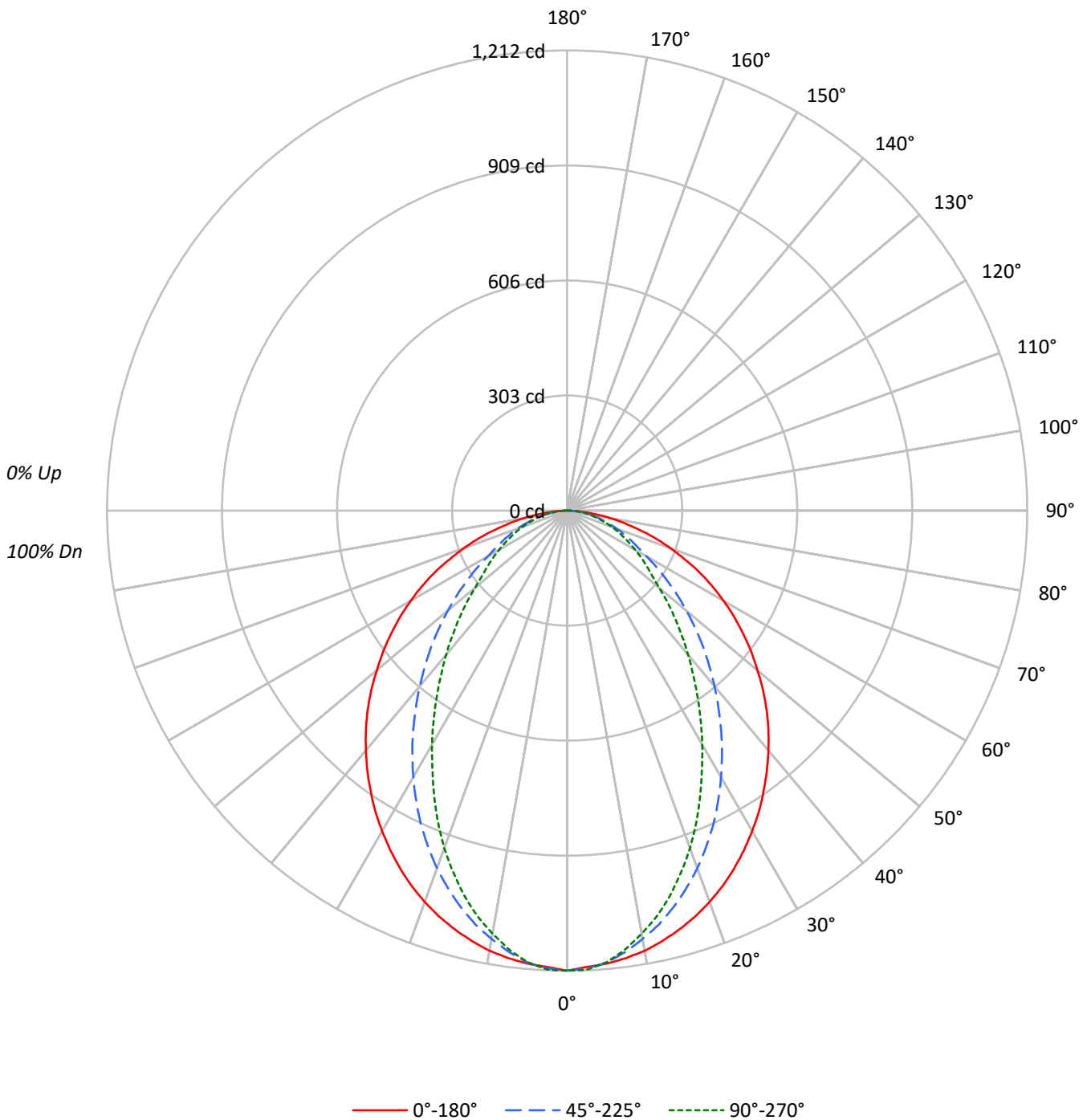
Lumens per Lamp: N/A
Luminaire Lumens: 2413.7 lumens
Efficiency: N/A
Efficacy: 91.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
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°	10714	10714	10714
5°	10629	10605	10597
10°	10568	10287	10159
15°	10456	9900	9599
20°	10320	9430	8902
25°	10151	8890	8090
30°	9950	8276	7265
35°	9740	7632	6467
40°	9520	6968	5722
45°	9288	6322	5029
50°	9002	5642	4342
55°	8728	4962	3945
60°	8421	4258	3659
65°	8040	3862	3414
70°	7468	3573	3226
75°	6764	3290	3047
80°	5901	3040	2861
85°	4524	2800	2627

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9288 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.8	4.7
10°-20°	306.0	12.7
20°-30°	423.7	17.6
30°-40°	454.8	18.8
40°-50°	413.6	17.1
50°-60°	325.7	13.5
60°-70°	222.9	9.2
70°-80°	120.0	5.0
80°-90°	34.0	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°	842.6	34.9
0°-40°	1297.4	53.8
0°-60°	2036.8	84.4
0°-90°	2413.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2413.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1212	1212	1212	1212	1212	
5°	1198	1211	1195	1189	1194	114
15°	1142	1130	1082	1052	1049	322
25°	1041	998	911	845	829	479
35°	902	832	707	622	599	564
45°	743	648	506	418	402	573
55°	566	458	322	260	256	506
65°	384	275	185	164	163	379
75°	198	120	96	88	89	211
85°	45	30	28	26	26	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1211.8	1211.8	1211.8	1211.8	1211.8
2.5°	1202.9	1217.2	1206.5	1208.3	1210.1
5°	1197.6	1210.9	1194.9	1188.7	1194.0
7.5°	1188.7	1197.6	1172.6	1161.0	1166.4
10°	1177.1	1178.8	1145.8	1128.9	1131.6
12.5°	1161.0	1156.6	1116.4	1092.3	1094.1
15°	1142.3	1129.8	1081.6	1052.2	1048.7
17.5°	1120.9	1100.4	1043.3	1005.9	998.7
20°	1096.8	1069.2	1002.3	954.1	946.1
22.5°	1070.1	1034.4	957.7	900.6	889.0
25°	1040.6	997.8	911.3	845.3	829.3
27.5°	1008.5	958.6	861.4	789.2	768.7
30°	974.6	917.6	810.6	733.0	711.6
32.5°	939.9	875.7	758.8	676.8	654.5
35°	902.4	832.0	707.1	621.5	599.2
37.5°	864.1	786.5	654.5	568.0	544.8
40°	824.8	741.0	603.7	514.5	495.8
42.5°	784.7	694.6	553.8	464.6	447.6
45°	742.8	648.3	505.6	418.2	402.2
47.5°	700.0	601.0	456.6	374.5	359.4
50°	654.5	553.8	410.2	331.7	315.7
52.5°	610.8	505.6	365.6	289.8	281.8
55°	566.2	458.3	321.9	259.5	255.9
57.5°	521.7	411.1	281.8	235.4	231.8
60°	476.2	364.7	240.8	210.4	206.9
62.5°	430.7	319.2	210.4	186.4	184.6
65°	384.3	274.6	184.6	164.1	163.2
67.5°	335.3	231.8	161.4	144.5	143.6
70°	288.9	189.0	138.2	124.8	124.8
72.5°	245.2	149.8	116.8	106.1	106.1
75°	198.0	120.4	96.3	88.3	89.2
77.5°	156.0	94.5	77.6	72.2	72.2
80°	115.9	70.4	59.7	55.3	56.2
82.5°	78.5	49.0	42.8	40.1	40.1
85°	44.6	30.3	27.6	25.9	25.9
87.5°	16.1	14.3	13.4	11.6	12.5
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	19.38	20.91	19.75	21.22	21.53	15.16	16.68	15.52	17.00	17.31
	3H	21.16	22.53	21.53	22.85	23.22	16.77	18.14	17.15	18.47	18.83
	4H	21.83	23.11	22.23	23.46	23.84	17.40	18.69	17.80	19.04	19.41
	6H	22.34	23.53	22.75	23.89	24.28	17.90	19.09	18.31	19.46	19.85
	8H	22.50	23.63	22.93	24.02	24.42	18.07	19.20	18.50	19.59	19.99
	12H	22.60	23.68	23.03	24.07	24.50	18.19	19.28	18.62	19.66	20.09
4H	2H	19.48	20.76	19.88	21.11	21.49	15.88	17.16	16.28	17.51	17.89
	3H	21.42	22.49	21.83	22.89	23.29	17.68	18.75	18.10	19.15	19.56
	4H	22.18	23.14	22.61	23.56	23.99	18.42	19.39	18.85	19.80	20.24
	6H	22.81	23.65	23.27	24.09	24.55	19.04	19.88	19.49	20.32	20.78
	8H	23.03	23.82	23.49	24.26	24.73	19.25	20.04	19.72	20.48	20.95
	12H	23.19	23.89	23.67	24.37	24.84	19.42	20.12	19.90	20.60	21.07
8H	4H	22.23	23.02	22.70	23.46	23.93	18.81	19.60	19.27	20.04	20.51
	6H	22.93	23.58	23.43	24.07	24.55	19.54	20.19	20.04	20.68	21.16
	8H	23.20	23.78	23.71	24.29	24.78	19.83	20.41	20.34	20.92	21.41
	12H	23.42	23.93	23.93	24.43	24.99	20.08	20.59	20.58	21.08	21.65
12H	4H	22.23	22.93	22.71	23.41	23.88	18.87	19.57	19.35	20.05	20.52
	6H	22.93	23.51	23.44	24.02	24.51	19.62	20.21	20.14	20.72	21.21
	8H	23.23	23.75	23.74	24.24	24.81	19.97	20.49	20.48	20.98	21.54