

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: P1056083

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056083
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-9)
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-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

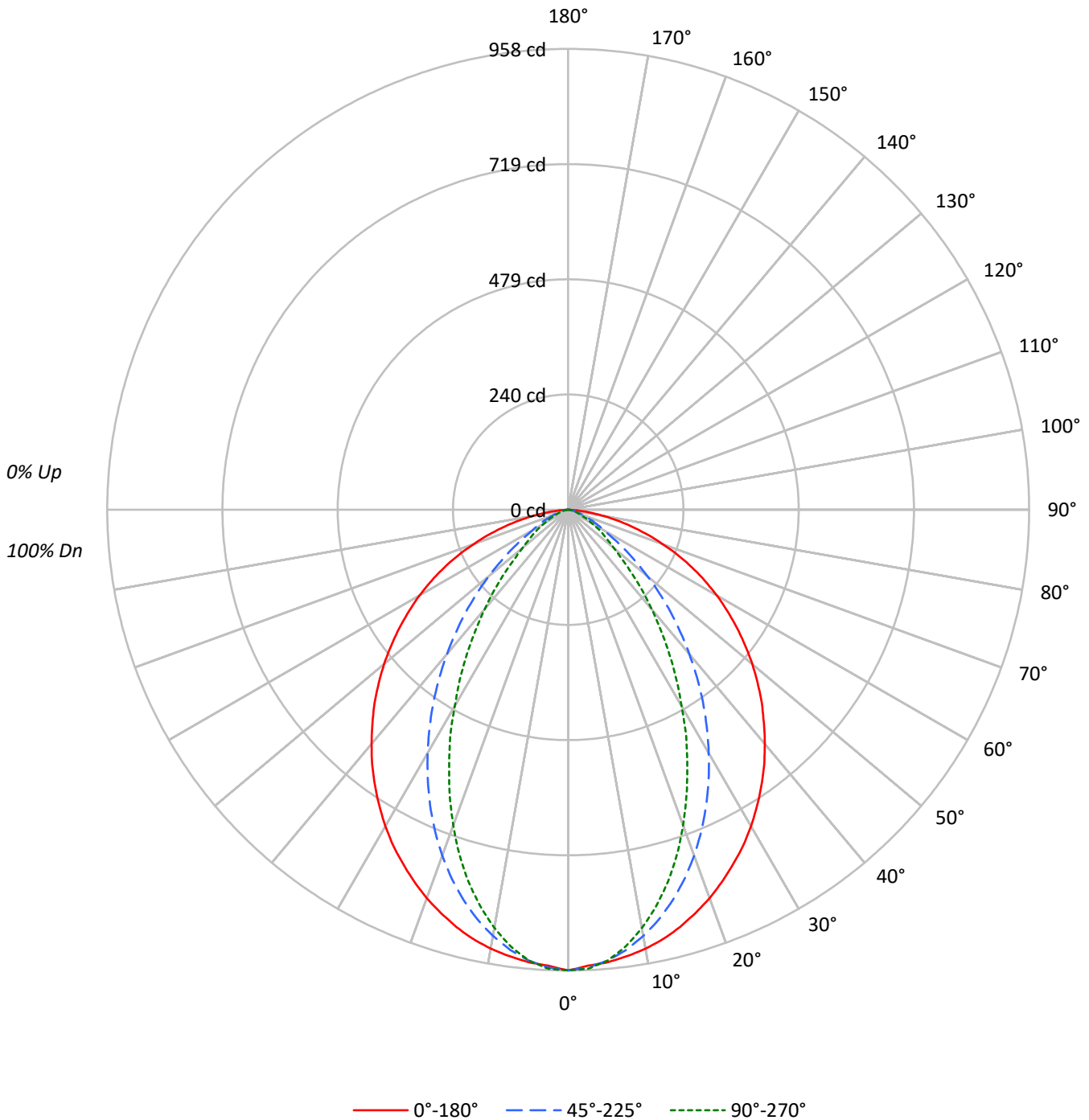
Lumens per Lamp: N/A
Luminaire Lumens: 1548.6 lumens
Efficiency: N/A
Efficacy: 58.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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	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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89					89			
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78					78			
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68					68			
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	71	66	62	60					60			
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54					54			
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	48					48			
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44					44			
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40					40			
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37					37			
10	60	48	41	36	59	47	40	36	46	40	36	45	40	35	45	39	35	34					34			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8467	8467	8467
5°	8381	8350	8350
10°	8318	8077	7926
15°	8220	7689	7330
20°	8088	7199	6569
25°	7924	6620	5707
30°	7756	5963	4806
35°	7555	5265	3956
40°	7338	4519	3119
45°	7113	3757	2331
50°	6869	2956	1704
55°	6597	2186	1361
60°	6307	1514	1042
65°	5933	1176	766
70°	5372	830	600
75°	4690	577	458
80°	3768	453	407
85°	2080	365	365

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7113 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.8	5.7
10°-20°	237.4	15.3
20°-30°	316.6	20.4
30°-40°	318.8	20.6
40°-50°	261.4	16.9
50°-60°	178.7	11.5
60°-70°	99.8	6.4
70°-80°	39.6	2.6
80°-90°	7.5	0.5
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°	642.8	41.5
0°-40°	961.5	62.1
0°-60°	1401.6	90.5
0°-90°	1548.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1548.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	958	958	958	958	958	
5°	944	955	941	936	941	90
15°	898	888	840	811	801	253
25°	812	772	679	610	585	374
35°	700	626	488	395	366	438
45°	569	465	300	211	186	439
55°	428	300	142	94	88	383
65°	284	143	56	40	37	280
75°	137	38	17	14	13	147
85°	20	4	4	4	4	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	957.7	957.7	957.7	957.7	957.7
2.5°	948.8	960.4	952.3	953.2	955.0
5°	944.3	955.0	940.8	936.3	940.8
7.5°	936.3	944.3	922.9	914.0	915.8
10°	926.5	929.2	899.7	884.6	882.8
12.5°	914.0	910.4	872.1	849.8	844.4
15°	898.0	888.1	840.0	810.6	800.8
17.5°	879.2	862.3	804.3	766.0	751.7
20°	859.6	834.6	765.1	716.0	698.2
22.5°	836.4	805.2	723.2	663.4	642.9
25°	812.3	772.2	678.6	609.9	585.0
27.5°	787.4	738.3	632.2	555.5	530.6
30°	759.7	701.8	584.1	501.1	470.8
32.5°	730.3	664.3	535.9	447.6	419.1
35°	700.0	626.0	487.8	395.0	366.5
37.5°	668.8	586.7	439.6	345.1	316.6
40°	635.8	546.6	391.5	297.8	270.2
42.5°	601.9	505.6	345.1	253.2	227.4
45°	568.9	464.6	300.5	211.3	186.4
47.5°	534.1	423.6	256.8	172.1	150.7
50°	499.4	382.5	214.9	138.2	123.9
52.5°	463.7	341.5	176.6	113.2	103.4
55°	428.0	300.5	141.8	94.5	88.3
57.5°	392.4	259.5	109.7	80.3	73.1
60°	356.7	219.4	85.6	65.1	58.9
62.5°	320.1	179.2	70.4	51.7	46.4
65°	283.6	142.7	56.2	40.1	36.6
67.5°	247.0	108.8	42.8	31.2	28.5
70°	207.8	77.6	32.1	24.1	23.2
72.5°	173.9	52.6	23.2	18.7	17.8
75°	137.3	37.5	16.9	14.3	13.4
77.5°	106.1	24.1	12.5	11.6	10.7
80°	74.0	13.4	8.9	8.0	8.0
82.5°	45.5	7.1	6.2	5.4	5.4
85°	20.5	3.6	3.6	3.6	3.6
87.5°	3.6	1.8	1.8	1.8	1.8
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	18.15	19.55	18.51	19.87	20.18	9.24	10.65	9.60	10.96	11.27
	3H	19.73	20.98	20.11	21.31	21.68	9.83	11.08	10.21	11.41	11.77
	4H	20.33	21.50	20.73	21.85	22.23	9.99	11.16	10.39	11.51	11.89
	6H	20.76	21.83	21.17	22.20	22.60	10.09	11.17	10.51	11.54	11.93
	8H	20.87	21.89	21.30	22.28	22.69	10.11	11.14	10.54	11.53	11.93
	12H	20.91	21.89	21.35	22.27	22.70	10.12	11.10	10.55	11.48	11.91
4H	2H	18.00	19.17	18.40	19.52	19.90	9.82	10.99	10.22	11.34	11.72
	3H	19.65	20.61	20.06	21.01	21.41	10.53	11.49	10.95	11.89	12.30
	4H	20.25	21.11	20.69	21.53	21.97	10.74	11.60	11.17	12.01	12.46
	6H	20.75	21.49	21.21	21.93	22.40	10.90	11.65	11.36	12.09	12.55
	8H	20.89	21.58	21.36	22.03	22.50	10.94	11.63	11.40	12.08	12.54
	12H	20.96	21.58	21.45	22.06	22.53	10.96	11.58	11.45	12.06	12.53
8H	4H	20.15	20.84	20.61	21.28	21.75	11.01	11.70	11.48	12.15	12.62
	6H	20.63	21.19	21.13	21.69	22.17	11.21	11.78	11.71	12.27	12.75
	8H	20.77	21.28	21.29	21.79	22.28	11.27	11.78	11.79	12.29	12.78
	12H	20.86	21.31	21.38	21.81	22.37	11.33	11.78	11.84	12.27	12.84
12H	4H	20.11	20.72	20.59	21.20	21.68	11.04	11.65	11.52	12.13	12.60
	6H	20.57	21.08	21.09	21.60	22.09	11.24	11.75	11.76	12.26	12.75
	8H	20.74	21.19	21.25	21.68	22.25	11.33	11.78	11.85	12.28	12.85