

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: P1056199

Luminaire Tested: S124R3DR-H795D835-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056199
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-H795D835-X4F0-XX-UDD-FLL-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

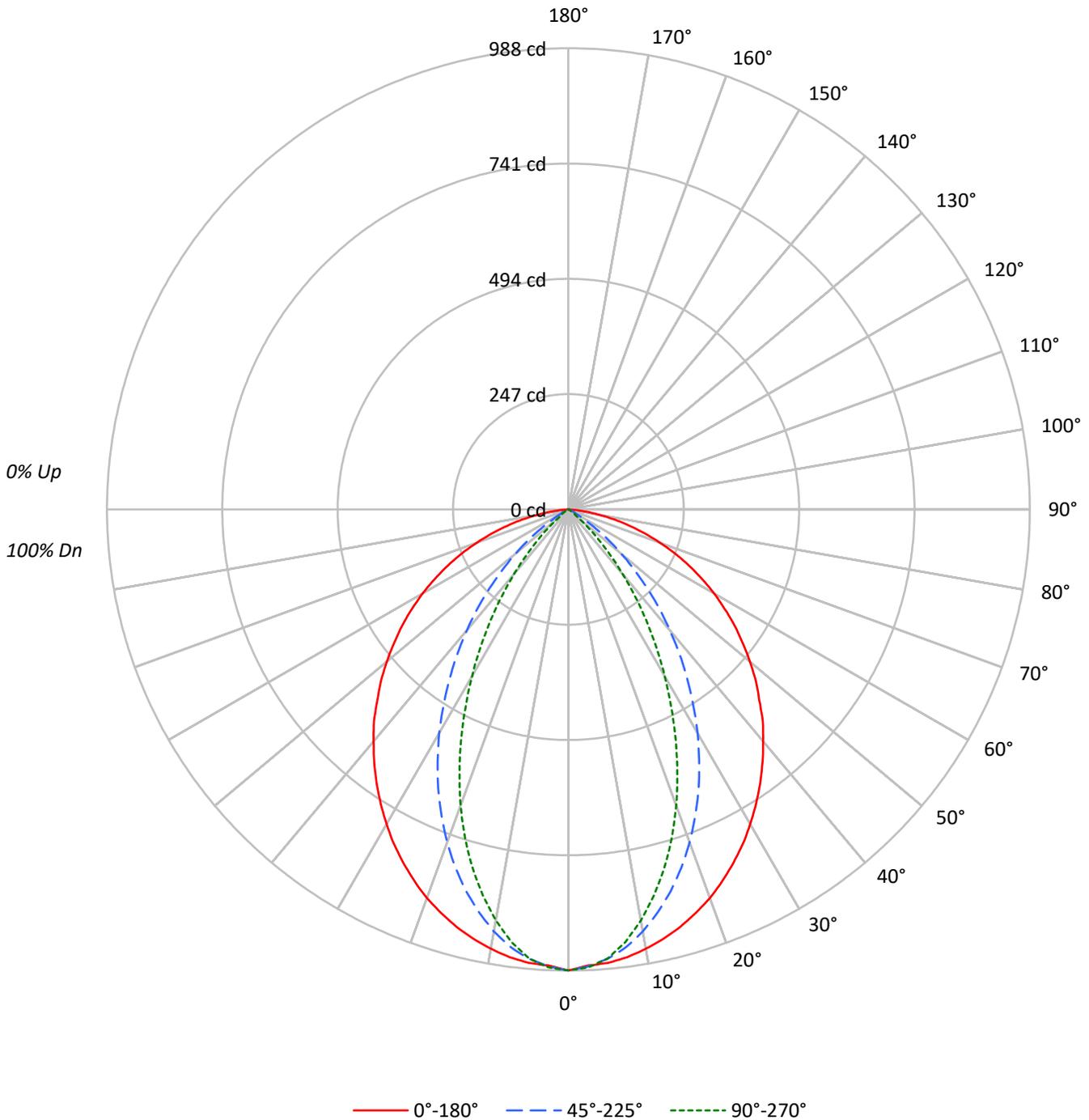
Lumens per Lamp: N/A
Luminaire Lumens: 1380.6 lumens
Efficiency: N/A
Efficacy: 58.0 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	8733	8733	8733
5°	8654	8577	8569
10°	8581	8242	8024
15°	8474	7747	7269
20°	8337	7143	6351
25°	8153	6434	5300
30°	7949	5645	4211
35°	7724	4787	3135
40°	7488	3901	2090
45°	7228	2978	1150
50°	6979	2038	319
55°	6702	1105	210
60°	6369	343	120
65°	5956	224	61
70°	5382	101	26
75°	4632	34	0
80°	3503	0	0
85°	1471	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7228 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.1	6.6
10°-20°	239.2	17.3
20°-30°	309.1	22.4
30°-40°	295.5	21.4
40°-50°	221.0	16.0
50°-60°	131.5	9.5
60°-70°	66.8	4.8
70°-80°	23.2	1.7
80°-90°	3.2	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°	639.5	46.3
0°-40°	934.9	67.7
0°-60°	1287.4	93.3
0°-90°	1380.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1380.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	988	988	988	988	988	
5°	975	983	966	962	966	92
15°	926	906	846	807	794	261
25°	836	778	660	572	543	385
35°	716	617	444	330	290	448
45°	578	444	238	127	92	447
55°	435	270	72	16	14	388
65°	285	109	11	4	3	282
75°	136	14	1	1	0	144
85°	14	0	0	0	0	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	987.7	987.7	987.7	987.7	987.7
2.5°	978.1	989.7	980.0	981.0	981.9
5°	975.1	982.9	966.4	961.6	965.5
7.5°	967.4	970.3	946.1	933.5	934.5
10°	955.8	952.9	918.0	896.7	893.8
12.5°	942.2	932.5	884.1	853.1	846.4
15°	925.8	906.4	846.4	806.7	794.1
17.5°	906.4	878.3	804.7	752.4	736.9
20°	886.1	847.3	759.2	694.3	675.0
22.5°	861.8	812.5	709.8	633.3	609.1
25°	835.7	777.6	659.5	572.3	543.3
27.5°	808.6	739.8	606.2	510.3	476.4
30°	778.6	700.1	552.9	447.4	412.5
32.5°	747.6	659.5	497.7	389.3	350.5
35°	715.6	616.9	443.5	330.2	290.5
37.5°	682.7	574.2	391.2	274.0	233.4
40°	648.8	530.7	338.0	220.8	181.1
42.5°	615.9	487.1	287.6	170.4	133.6
45°	578.1	443.5	238.2	126.9	92.0
47.5°	544.2	400.9	190.8	86.2	54.2
50°	507.4	355.4	148.2	50.4	23.2
52.5°	470.6	312.8	108.5	22.3	17.4
55°	434.8	270.2	71.7	16.5	13.6
57.5°	397.0	227.6	38.7	12.6	9.7
60°	360.2	185.9	19.4	9.7	6.8
62.5°	322.5	146.2	15.5	5.8	3.9
65°	284.7	109.4	10.7	3.9	2.9
67.5°	246.9	74.6	6.8	1.9	1.0
70°	208.2	45.5	3.9	1.0	1.0
72.5°	171.4	23.2	1.9	1.0	1.0
75°	135.6	14.5	1.0	1.0	0.0
77.5°	100.7	7.7	1.0	1.0	0.0
80°	68.8	2.9	0.0	0.0	0.0
82.5°	39.7	1.0	0.0	0.0	0.0
85°	14.5	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



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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	17.98	19.31	18.35	19.63	19.94	0.00	0.00	0.00	0.00	0.00
	3H	19.53	20.70	19.91	21.03	21.40	0.00	0.00	0.00	0.00	0.00
	4H	20.12	21.22	20.52	21.57	21.95	0.00	0.00	0.00	0.00	0.00
	6H	20.54	21.54	20.95	21.91	22.31	0.00	0.00	0.00	0.00	0.00
	8H	20.64	21.59	21.07	21.98	22.39	0.00	0.00	0.00	0.00	0.00
	12H	20.66	21.57	21.09	21.95	22.38	0.00	0.00	0.00	0.00	0.00
4H	2H	17.76	18.86	18.16	19.21	19.59	0.00	0.00	0.00	0.00	0.00
	3H	19.33	20.22	19.74	20.62	21.03	0.00	0.00	0.00	0.00	0.00
	4H	19.91	20.71	20.34	21.13	21.57	0.00	0.00	0.00	0.00	0.00
	6H	20.37	21.06	20.83	21.50	21.97	0.00	0.00	0.00	0.00	0.00
	8H	20.49	21.13	20.96	21.58	22.05	0.00	0.00	0.00	0.00	0.00
	12H	20.53	21.09	21.02	21.58	22.05	0.00	0.00	0.00	0.00	0.00
8H	4H	19.77	20.41	20.24	20.86	21.33	0.00	0.00	0.00	0.38	0.85
	6H	20.21	20.74	20.72	21.23	21.71	0.00	0.00	0.00	0.22	0.70
	8H	20.33	20.80	20.85	21.31	21.81	0.00	0.00	0.00	0.12	0.61
	12H	20.38	20.79	20.89	21.29	21.86	0.00	0.00	0.00	0.00	0.57
12H	4H	19.73	20.29	20.21	20.78	21.25	0.00	0.26	0.19	0.75	1.22
	6H	20.15	20.62	20.67	21.14	21.63	0.00	0.06	0.11	0.58	1.07
	8H	20.29	20.70	20.80	21.19	21.77	0.00	0.00	0.06	0.46	1.03