

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: P1056069

Luminaire Tested: S124R3DR-S795D840-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056069
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-S795D840-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, 80 CRI LEDS
Ballast/Driver: -

Summary

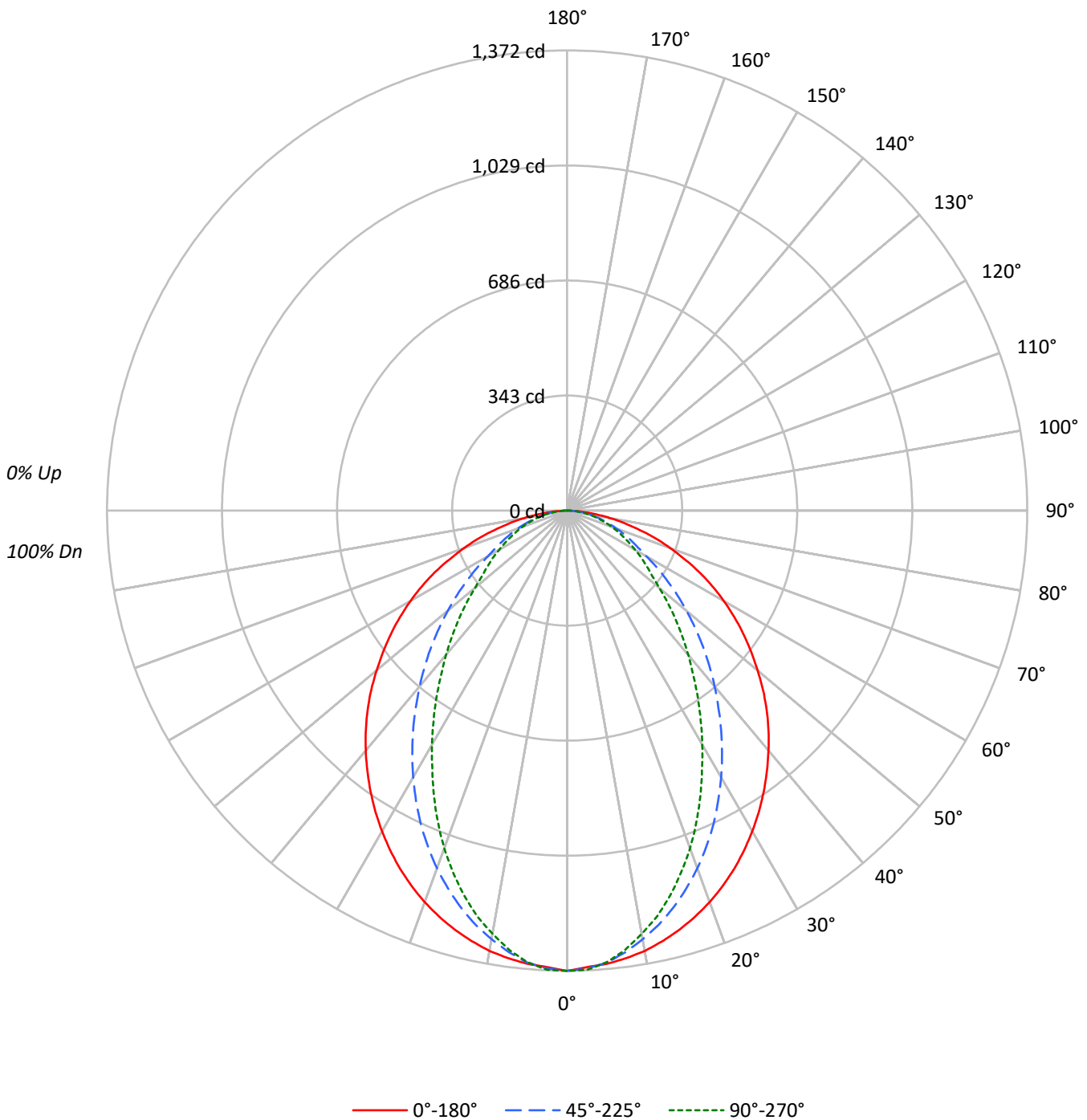
Lumens per Lamp: N/A
Luminaire Lumens: 2733.5 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (Ain): 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									
RC	80									70									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	110	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88	86						86													
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76	73						73													
3	93	83	75	69	90	81	74	69	79	73	68	76	71	67	73	69	65	63						63													
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57	55						55													
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49						49													
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43						43													
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39						39													
8	64	51	43	38	62	51	43	38	49	42	37	48	42	37	47	41	37	35						35													
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32						32													
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29						29													

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12134	12134	12134
5°	12037	12010	12001
10°	11967	11650	11505
15°	11841	11213	10870
20°	11687	10680	10082
25°	11497	10069	9162
30°	11269	9372	8228
35°	11031	8643	7324
40°	10781	7891	6481
45°	10518	7160	5695
50°	10195	6389	4917
55°	9885	5620	4467
60°	9536	4822	4143
65°	9107	4372	3866
70°	8458	4046	3655
75°	7659	3727	3450
80°	6685	3447	3238
85°	5123	3175	2972

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10518 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.8	4.7
10°-20°	346.6	12.7
20°-30°	479.9	17.6
30°-40°	515.1	18.8
40°-50°	468.4	17.1
50°-60°	368.9	13.5
60°-70°	252.5	9.2
70°-80°	135.9	5.0
80°-90°	38.5	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°	954.3	34.9
0°-40°	1469.3	53.8
0°-60°	2306.6	84.4
0°-90°	2733.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2733.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1372	1372	1372	1372	1372	
5°	1356	1371	1353	1346	1352	129
15°	1294	1280	1225	1192	1188	365
25°	1178	1130	1032	957	939	543
35°	1022	942	801	704	679	639
45°	841	734	573	474	456	649
55°	641	519	365	294	290	573
65°	435	311	209	186	185	429
75°	224	136	109	100	101	239
85°	50	34	31	29	29	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1372.4	1372.4	1372.4	1372.4	1372.4
2.5°	1362.3	1378.5	1366.4	1368.4	1370.4
5°	1356.3	1371.4	1353.2	1346.2	1352.2
7.5°	1346.2	1356.3	1328.0	1314.8	1320.9
10°	1333.0	1335.0	1297.7	1278.5	1281.5
12.5°	1314.8	1309.8	1264.4	1237.1	1239.1
15°	1293.6	1279.5	1225.0	1191.6	1187.6
17.5°	1269.4	1246.2	1181.5	1139.1	1131.1
20°	1242.1	1210.8	1135.1	1080.6	1071.5
22.5°	1211.8	1171.4	1084.6	1020.0	1006.8
25°	1178.5	1130.0	1032.1	957.4	939.2
27.5°	1142.2	1085.6	975.5	893.7	870.5
30°	1103.8	1039.2	918.0	830.1	805.9
32.5°	1064.4	991.7	859.4	766.5	741.2
35°	1022.0	942.2	800.8	703.9	678.6
37.5°	978.6	890.7	741.2	643.3	617.0
40°	934.1	839.2	683.7	582.7	561.5
42.5°	888.7	786.7	627.1	526.1	507.0
45°	841.2	734.2	572.6	473.6	455.5
47.5°	792.7	680.7	517.1	424.1	407.0
50°	741.2	627.1	464.5	375.7	357.5
52.5°	691.8	572.6	414.0	328.2	319.1
55°	641.3	519.1	364.6	293.9	289.8
57.5°	590.8	465.5	319.1	266.6	262.6
60°	539.3	413.0	272.7	238.3	234.3
62.5°	487.8	361.5	238.3	211.1	209.0
65°	435.3	311.0	209.0	185.8	184.8
67.5°	379.7	262.6	182.8	163.6	162.6
70°	327.2	214.1	156.5	141.4	141.4
72.5°	277.7	169.7	132.3	120.2	120.2
75°	224.2	136.3	109.1	100.0	101.0
77.5°	176.7	107.0	87.9	81.8	81.8
80°	131.3	79.8	67.7	62.6	63.6
82.5°	88.9	55.5	48.5	45.4	45.4
85°	50.5	34.3	31.3	29.3	29.3
87.5°	18.2	16.2	15.1	13.1	14.1
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	19.81	21.34	20.18	21.65	21.97	15.59	17.12	15.96	17.43	17.74
	3H	21.59	22.96	21.97	23.29	23.65	17.20	18.57	17.58	18.90	19.26
	4H	22.26	23.55	22.66	23.89	24.27	17.83	19.12	18.23	19.47	19.85
	6H	22.77	23.96	23.18	24.32	24.72	18.33	19.52	18.75	19.89	20.28
	8H	22.93	24.06	23.36	24.45	24.86	18.50	19.64	18.93	20.03	20.43
	12H	23.03	24.12	23.46	24.50	24.93	18.63	19.71	19.06	20.09	20.52
4H	2H	19.91	21.19	20.31	21.54	21.92	16.31	17.60	16.71	17.94	18.32
	3H	21.85	22.92	22.26	23.32	23.72	18.12	19.19	18.53	19.59	19.99
	4H	22.61	23.57	23.04	23.99	24.43	18.85	19.82	19.29	20.23	20.67
	6H	23.24	24.08	23.70	24.53	24.99	19.47	20.31	19.93	20.75	21.21
	8H	23.46	24.25	23.93	24.69	25.16	19.69	20.47	20.15	20.91	21.38
	12H	23.62	24.32	24.10	24.80	25.27	19.85	20.55	20.34	21.03	21.50
8H	4H	22.67	23.45	23.13	23.90	24.36	19.24	20.03	19.71	20.47	20.94
	6H	23.37	24.01	23.86	24.51	24.98	19.97	20.62	20.47	21.11	21.59
	8H	23.63	24.22	24.15	24.73	25.21	20.26	20.85	20.78	21.35	21.84
	12H	23.85	24.37	24.36	24.86	25.42	20.51	21.02	21.02	21.51	22.08
12H	4H	22.66	23.36	23.14	23.84	24.31	19.30	20.00	19.78	20.48	20.95
	6H	23.36	23.94	23.87	24.45	24.94	20.06	20.64	20.57	21.15	21.64
	8H	23.67	24.18	24.18	24.67	25.24	20.41	20.92	20.92	21.41	21.98