

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: P243456

Luminaire Tested: S124DRP-H795D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243456
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-84)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DRP-H795D927-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

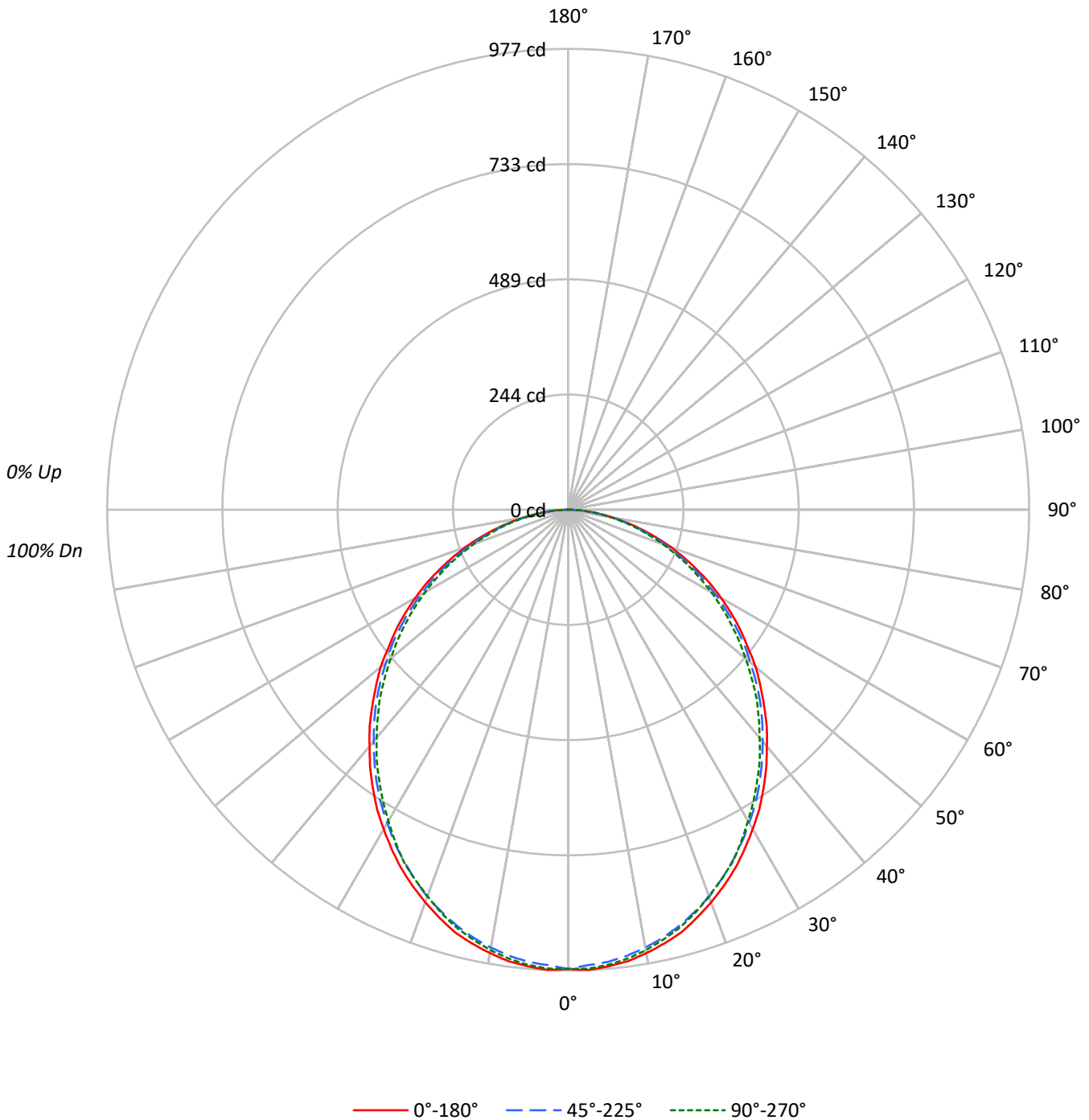
Lumens per Lamp: N/A
Luminaire Lumens: 2506.4 lumens
Efficiency: N/A
Efficacy: 106.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 23.6
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									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	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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84																												
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70																												
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60																												
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51																												
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44																												
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	52	46	41	39																												
7	66	52	44	38	64	51	43	37	50	43	37	48	42	37	47	41	37	35																												
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31																												
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28																												
10	54	41	33	28	52	40	33	27	39	32	27	38	32	27	37	31	27	25																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8654	8654	8654
5°	8673	8588	8644
10°	8616	8509	8558
15°	8536	8398	8435
20°	8378	8258	8250
25°	8220	8073	8081
30°	8025	7870	7822
35°	7831	7676	7582
40°	7602	7437	7327
45°	7379	7229	7090
50°	7176	6967	6793
55°	6912	6727	6518
60°	6647	6421	6224
65°	6331	6114	5914
70°	5991	5723	5538
75°	5523	5306	5141
80°	4868	4786	4663
85°	4284	4284	4202

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7379 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.8	3.7
10°-20°	258.8	10.3
20°-30°	381.1	15.2
30°-40°	443.4	17.7
40°-50°	443.6	17.7
50°-60°	388.0	15.5
60°-70°	288.1	11.5
70°-80°	164.2	6.6
80°-90°	47.3	1.9
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°	731.7	29.2
0°-40°	1175.1	46.9
0°-60°	2006.7	80.1
0°-90°	2506.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2506.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	974	974	974	974	974	
5°	972	970	962	970	969	92
15°	928	923	913	918	917	261
25°	838	834	823	826	824	386
35°	722	715	707	701	699	451
45°	587	585	575	566	564	453
55°	446	443	434	425	421	399
65°	301	299	291	284	281	299
75°	161	158	154	151	150	171
85°	42	41	42	40	41	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	973.6	973.6	973.6	973.6	973.6
2.5°	976.8	974.4	966.5	974.4	973.6
5°	972.0	970.4	962.5	969.6	968.8
7.5°	965.7	962.5	953.8	960.9	960.1
10°	954.6	952.2	942.7	949.8	948.2
12.5°	941.9	939.5	929.2	934.8	933.2
15°	927.6	922.9	912.6	918.1	916.6
17.5°	907.0	903.9	893.6	898.3	896.0
20°	885.7	881.7	873.0	873.8	872.2
22.5°	862.7	858.7	848.4	851.6	848.4
25°	838.1	834.2	823.1	825.5	823.9
27.5°	810.4	806.4	796.1	796.9	793.8
30°	781.9	777.1	766.8	766.0	762.1
32.5°	753.4	748.6	738.3	735.1	731.2
35°	721.7	715.3	707.4	701.1	698.7
37.5°	689.2	686.0	674.1	670.2	667.0
40°	655.1	652.0	640.9	635.3	631.4
42.5°	622.7	618.7	608.4	600.5	597.3
45°	587.0	584.6	575.1	566.4	564.0
47.5°	552.2	551.4	539.5	530.8	526.8
50°	518.9	514.1	503.8	495.9	491.2
52.5°	480.1	479.3	470.6	460.3	456.3
55°	446.0	442.8	434.1	424.6	420.6
57.5°	410.4	408.8	397.7	389.8	385.8
60°	373.9	370.7	361.2	354.1	350.1
62.5°	339.1	335.1	326.4	319.2	315.3
65°	301.0	298.7	290.7	284.4	281.2
67.5°	265.4	262.2	254.3	248.7	245.6
70°	230.5	225.8	220.2	215.5	213.1
72.5°	195.7	191.7	187.0	183.8	180.6
75°	160.8	157.6	154.5	151.3	149.7
77.5°	127.5	124.4	122.8	122.0	120.4
80°	95.1	93.5	93.5	92.7	91.1
82.5°	67.3	65.8	65.8	65.8	65.0
85°	42.0	41.2	42.0	40.4	41.2
87.5°	19.8	19.8	20.6	19.8	20.6
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	18.80	20.41	19.16	20.73	21.04	18.45	20.06	18.81	20.38	20.69
	3H	20.55	22.01	20.93	22.33	22.69	20.16	21.62	20.54	21.95	22.31
	4H	21.21	22.58	21.60	22.93	23.30	20.81	22.18	21.21	22.53	22.91
	6H	21.68	22.95	22.09	23.32	23.71	21.30	22.57	21.71	22.94	23.33
	8H	21.83	23.05	22.26	23.44	23.84	21.46	22.67	21.88	23.06	23.46
	12H	21.94	23.10	22.37	23.48	23.91	21.57	22.74	22.00	23.12	23.55
4H	2H	19.37	20.74	19.77	21.09	21.47	19.09	20.47	19.49	20.81	21.19
	3H	21.34	22.49	21.75	22.89	23.29	21.02	22.18	21.43	22.57	22.97
	4H	22.13	23.17	22.56	23.58	24.02	21.80	22.84	22.23	23.25	23.69
	6H	22.73	23.64	23.18	24.08	24.54	22.42	23.33	22.87	23.77	24.22
	8H	22.93	23.78	23.39	24.22	24.69	22.63	23.48	23.09	23.92	24.39
	12H	23.08	23.85	23.56	24.32	24.79	22.78	23.55	23.27	24.03	24.49
8H	4H	22.41	23.26	22.87	23.70	24.17	22.12	22.97	22.58	23.41	23.88
	6H	23.13	23.84	23.62	24.33	24.80	22.86	23.57	23.36	24.06	24.53
	8H	23.40	24.04	23.91	24.54	25.03	23.15	23.78	23.66	24.29	24.78
	12H	23.63	24.19	24.14	24.68	25.24	23.38	23.94	23.89	24.43	25.00
12H	4H	22.44	23.20	22.92	23.68	24.15	22.16	22.92	22.64	23.40	23.87
	6H	23.18	23.82	23.69	24.32	24.81	22.92	23.56	23.43	24.06	24.55
	8H	23.51	24.07	24.02	24.56	25.12	23.27	23.83	23.77	24.32	24.88