

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: P243228

Luminaire Tested: S122RDRP-H485D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243228
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-63)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-H485D840-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

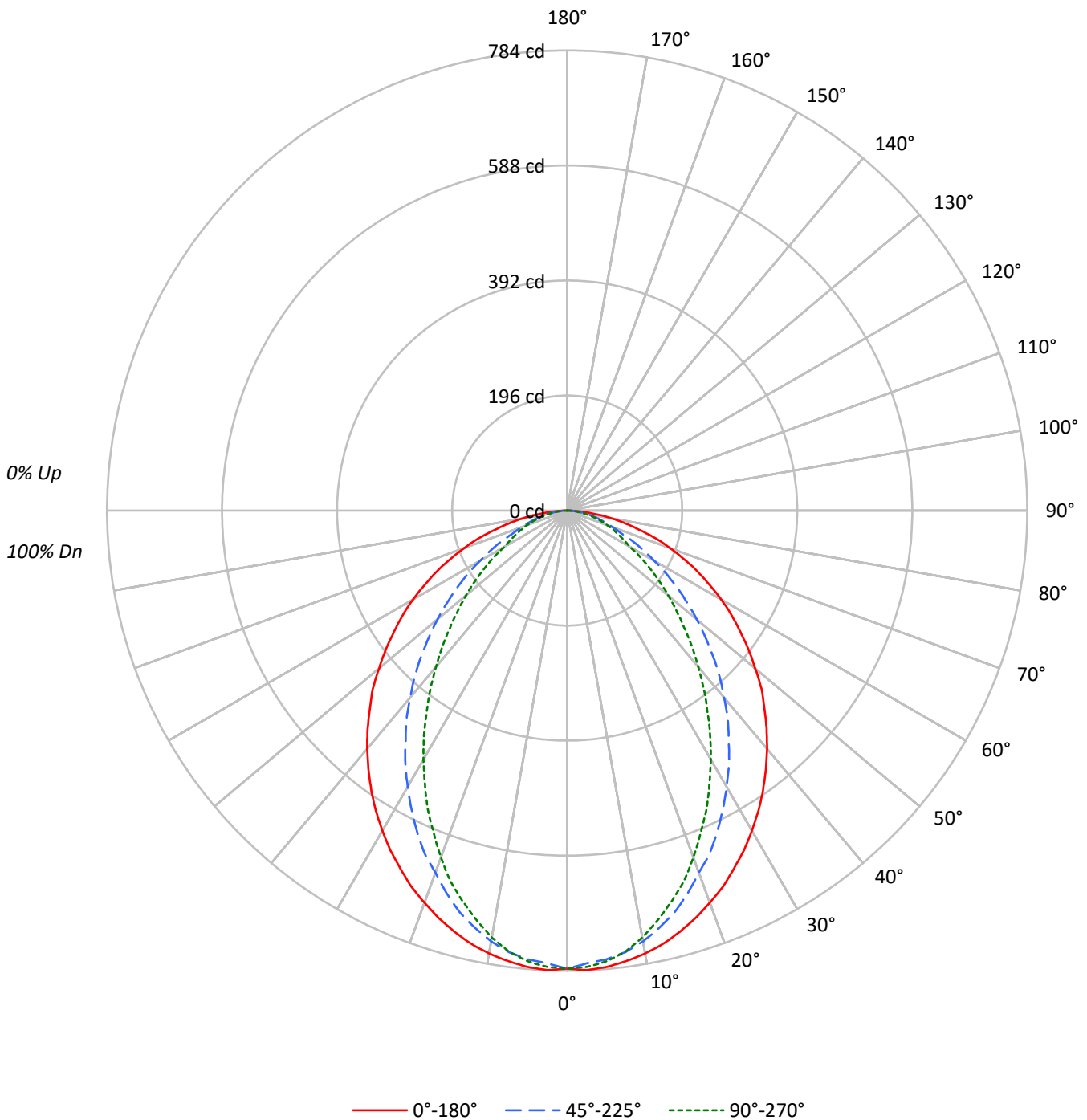
Lumens per Lamp: N/A
Luminaire Lumens: 1600.3 lumens
Efficiency: N/A
Efficacy: 93.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 17.2
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

TEST NUMBER: P243228

CATALOG NUMBER: S122RDRP-H485D840-X4F0-XX-UDD-F-W

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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	94	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76	74				74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64				64
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55				55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49				49
6	74	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	37	49	42	37	48	42	37	47	41	37	35				35
9	60	47	39	34	59	47	39	34	46	39	34	44	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°	14863	14863	14863
5°	14920	14675	14740
10°	14819	14415	14286
15°	14644	13967	13581
20°	14412	13305	12746
25°	14136	12707	11801
30°	13845	11950	10766
35°	13526	11161	9690
40°	13176	10346	8638
45°	12803	9485	7599
50°	12390	8540	6664
55°	11962	7601	5745
60°	11566	6541	4693
65°	11047	5521	4340
70°	10387	4572	4049
75°	9464	4165	3717
80°	8490	3697	3324
85°	7059	3082	2950

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12803 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.1	4.6
10°-20°	200.3	12.5
20°-30°	281.0	17.6
30°-40°	306.1	19.1
40°-50°	281.3	17.6
50°-60°	220.8	13.8
60°-70°	144.0	9.0
70°-80°	74.5	4.7
80°-90°	19.3	1.2
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°	554.4	34.6
0°-40°	860.4	53.8
0°-60°	1362.5	85.1
0°-90°	1600.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1600.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	780	780	780	780	780	
5°	780	776	768	773	771	74
15°	743	734	708	694	689	209
25°	673	649	605	575	562	310
35°	582	543	480	436	417	364
45°	475	427	352	301	282	367
55°	360	306	229	186	173	323
65°	245	186	122	100	96	242
75°	129	80	57	52	50	138
85°	32	16	14	14	14	37
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	780.3	780.3	780.3	780.3	780.3
2.5°	783.7	780.3	772.2	779.6	778.3
5°	780.3	776.3	767.5	772.9	770.9
7.5°	774.2	770.2	758.8	761.5	758.1
10°	766.2	760.8	745.3	742.6	738.6
12.5°	756.1	748.7	727.8	719.7	714.3
15°	742.6	733.9	708.3	694.1	688.7
17.5°	727.8	715.0	683.4	667.2	661.8
20°	711.0	696.1	656.4	639.6	628.8
22.5°	693.5	674.6	633.5	607.3	594.5
25°	672.6	649.0	604.6	575.0	561.5
27.5°	652.4	624.8	574.3	540.0	525.1
30°	629.5	599.2	543.3	503.6	489.5
32.5°	606.6	571.6	513.0	469.9	453.8
35°	581.7	543.3	480.0	435.6	416.7
37.5°	556.1	516.4	449.7	400.6	382.4
40°	529.9	485.4	416.1	364.9	347.4
42.5°	502.9	457.8	384.4	331.9	315.1
45°	475.3	426.8	352.1	300.9	282.1
47.5°	449.1	396.5	319.1	270.6	252.5
50°	418.1	366.3	288.2	239.0	224.9
52.5°	389.8	336.0	257.9	210.7	198.6
55°	360.2	306.3	228.9	185.8	173.0
57.5°	332.6	275.4	200.0	160.9	148.8
60°	303.6	245.7	171.7	136.0	123.2
62.5°	273.3	215.4	146.8	113.1	109.1
65°	245.1	185.8	122.5	99.6	96.3
67.5°	214.8	158.2	97.6	87.5	84.2
70°	186.5	131.3	82.1	74.7	72.7
72.5°	158.9	105.7	69.3	63.3	61.3
75°	128.6	80.1	56.6	51.8	50.5
77.5°	102.3	56.6	45.1	41.7	40.4
80°	77.4	41.1	33.7	31.6	30.3
82.5°	53.2	27.6	23.6	22.2	21.5
85°	32.3	15.5	14.1	13.5	13.5
87.5°	12.8	6.1	6.1	5.4	5.4
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	20.62	22.15	20.99	22.46	22.77	16.51	18.03	16.87	18.34	18.66
	3H	22.39	23.76	22.77	24.08	24.45	17.80	19.17	18.18	19.50	19.86
	4H	23.05	24.33	23.45	24.68	25.06	18.31	19.59	18.71	19.94	20.32
	6H	23.54	24.72	23.95	25.09	25.48	18.69	19.88	19.10	20.24	20.63
	8H	23.71	24.83	24.13	25.22	25.62	18.81	19.94	19.24	20.33	20.73
	12H	23.82	24.89	24.25	25.28	25.71	18.90	19.98	19.33	20.36	20.79
4H	2H	20.73	22.01	21.13	22.36	22.73	17.22	18.50	17.61	18.84	19.22
	3H	22.66	23.73	23.07	24.13	24.53	18.69	19.75	19.10	20.15	20.55
	4H	23.41	24.36	23.84	24.78	25.22	19.29	20.25	19.73	20.67	21.10
	6H	24.00	24.83	24.46	25.27	25.73	19.78	20.62	20.24	21.06	21.52
	8H	24.21	24.99	24.68	25.43	25.90	19.94	20.72	20.41	21.17	21.63
	12H	24.37	25.07	24.86	25.55	26.02	20.06	20.76	20.55	21.24	21.71
8H	4H	23.43	24.21	23.90	24.65	25.12	19.65	20.43	20.12	20.88	21.34
	6H	24.07	24.71	24.57	25.20	25.68	20.25	20.89	20.74	21.38	21.86
	8H	24.32	24.90	24.83	25.41	25.89	20.47	21.05	20.98	21.56	22.04
	12H	24.53	25.04	25.04	25.54	26.10	20.65	21.16	21.16	21.65	22.22
12H	4H	23.42	24.11	23.90	24.59	25.06	19.70	20.39	20.18	20.87	21.34
	6H	24.05	24.63	24.56	25.14	25.63	20.31	20.89	20.82	21.40	21.89
	8H	24.33	24.84	24.84	25.34	25.90	20.59	21.10	21.10	21.59	22.15