

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: P243124

Luminaire Tested: S122DRP-H290D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243124
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-48)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DRP-H290D840-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

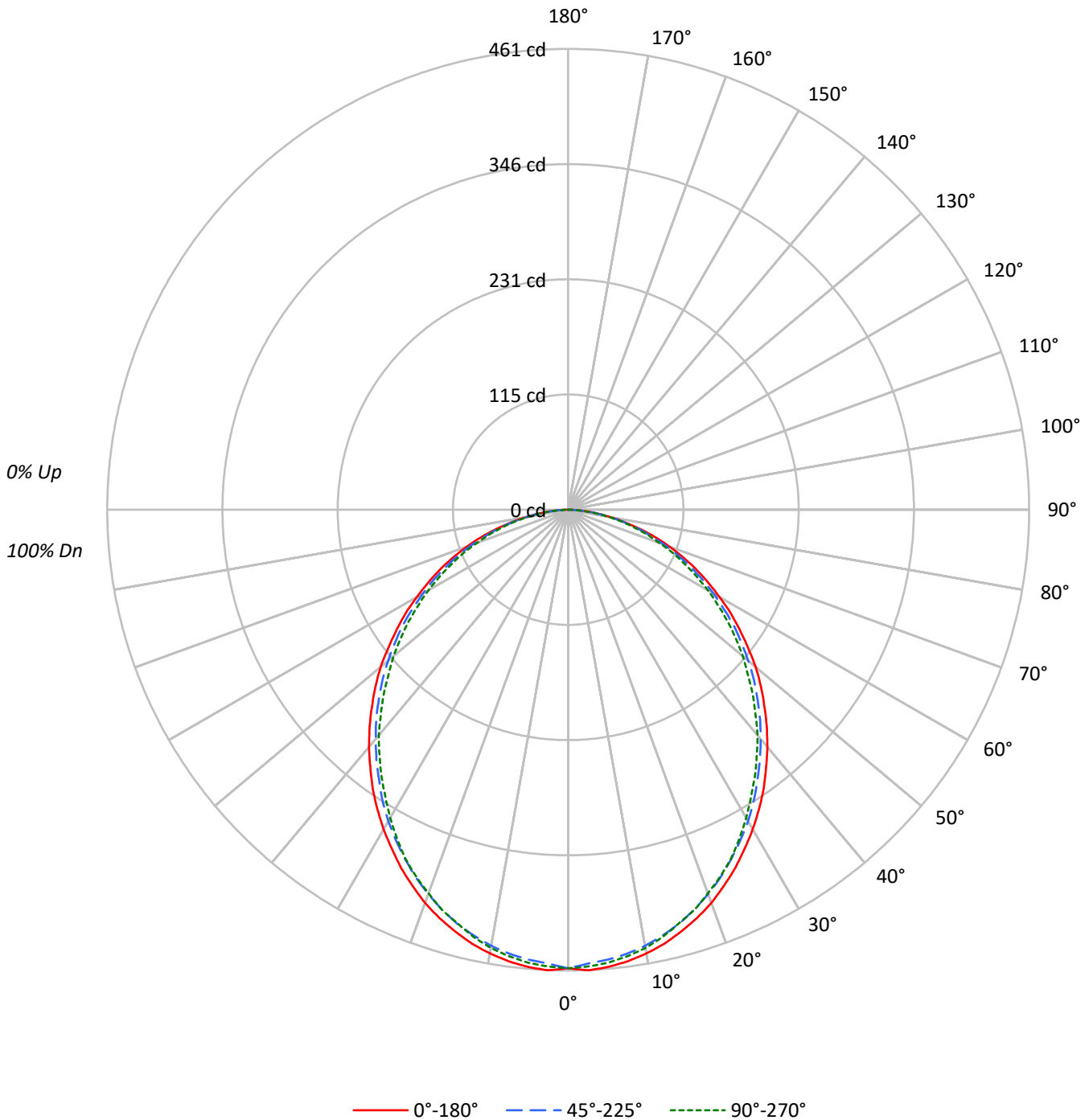
Lumens per Lamp: N/A
Luminaire Lumens: 1167.2 lumens
Efficiency: N/A
Efficacy: 104.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.2
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

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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	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	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71																												
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60																												
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51																												
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45																												
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39																												
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35																												
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	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	53	40	33	28	39	32	28	38	32	27	37	32	27	26																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8737	8737	8737
5°	8778	8641	8698
10°	8717	8570	8611
15°	8612	8454	8446
20°	8483	8295	8278
25°	8308	8104	8094
30°	8118	7914	7830
35°	7922	7669	7569
40°	7706	7442	7328
45°	7470	7208	7025
50°	7254	6967	6753
55°	6951	6711	6459
60°	6651	6392	6152
65°	6364	6058	5792
70°	5981	5675	5391
75°	5446	5225	4975
80°	4728	4596	4410
85°	4065	3606	3322

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7470 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.2	3.7
10°-20°	121.6	10.4
20°-30°	178.7	15.3
30°-40°	207.5	17.8
40°-50°	207.3	17.8
50°-60°	180.5	15.5
60°-70°	133.5	11.4
70°-80°	75.3	6.4
80°-90°	19.6	1.7
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°	343.5	29.4
0°-40°	551.0	47.2
0°-60°	938.8	80.4
0°-90°	1167.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1167.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	459	459	459	459	459	
5°	459	457	452	456	455	44
15°	437	435	429	430	428	123
25°	395	392	386	385	385	182
35°	341	337	330	327	326	213
45°	277	274	268	263	261	214
55°	209	208	202	197	194	187
65°	141	139	134	130	128	140
75°	74	74	71	68	68	79
85°	19	18	16	16	15	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	458.7	458.7	458.7	458.7	458.7
2.5°	461.2	459.1	454.5	458.3	457.4
5°	459.1	457.0	451.9	455.7	454.9
7.5°	455.7	453.6	448.1	451.9	450.7
10°	450.7	448.1	443.1	445.6	445.2
12.5°	444.7	442.2	436.3	438.4	437.6
15°	436.7	434.6	428.7	430.4	428.3
17.5°	428.3	424.9	419.4	421.1	419.8
20°	418.5	415.2	409.2	410.1	408.4
22.5°	407.1	403.7	398.2	398.2	397.4
25°	395.3	391.9	385.6	385.1	385.1
27.5°	382.2	379.2	372.9	371.6	370.8
30°	369.1	366.5	359.8	357.2	356.0
32.5°	355.1	351.7	345.4	342.4	340.3
35°	340.7	336.9	329.8	326.8	325.5
37.5°	325.1	321.3	315.0	312.4	309.9
40°	309.9	306.5	299.3	295.5	294.7
42.5°	293.8	290.4	284.1	279.9	277.3
45°	277.3	274.4	267.6	263.4	260.8
47.5°	261.3	257.9	252.0	246.9	243.5
50°	244.8	241.4	235.1	229.1	227.9
52.5°	226.6	224.5	218.1	212.6	211.0
55°	209.3	207.6	202.1	196.6	194.5
57.5°	192.8	190.7	184.3	180.1	177.6
60°	174.6	173.3	167.8	163.2	161.5
62.5°	157.7	156.0	151.3	146.7	144.6
65°	141.2	139.1	134.4	130.2	128.5
67.5°	124.3	122.2	118.4	115.0	113.3
70°	107.4	105.7	101.9	98.9	96.8
72.5°	90.9	89.2	85.8	82.9	82.4
75°	74.0	73.6	71.0	68.5	67.6
77.5°	58.3	57.9	56.2	55.0	54.1
80°	43.1	43.1	41.9	40.6	40.2
82.5°	29.6	30.0	28.7	27.9	27.9
85°	18.6	17.8	16.5	15.6	15.2
87.5°	7.6	6.3	5.9	4.7	4.2
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	18.82	20.43	19.18	20.74	21.06	18.39	20.00	18.75	20.31	20.63
	3H	20.57	22.02	20.95	22.35	22.71	20.09	21.54	20.46	21.87	22.23
	4H	21.22	22.58	21.61	22.93	23.31	20.71	22.08	21.11	22.43	22.81
	6H	21.67	22.94	22.08	23.31	23.70	21.17	22.44	21.59	22.81	23.20
	8H	21.81	23.02	22.24	23.41	23.81	21.32	22.53	21.74	22.91	23.31
	12H	21.90	23.06	22.33	23.44	23.87	21.40	22.55	21.82	22.94	23.37
4H	2H	19.38	20.74	19.77	21.09	21.47	19.03	20.40	19.43	20.75	21.13
	3H	21.35	22.50	21.76	22.89	23.29	20.95	22.09	21.36	22.49	22.89
	4H	22.13	23.17	22.56	23.58	24.02	21.70	22.73	22.13	23.15	23.58
	6H	22.72	23.62	23.17	24.06	24.52	22.28	23.18	22.74	23.63	24.08
	8H	22.90	23.75	23.36	24.19	24.65	22.46	23.31	22.92	23.75	24.22
	12H	23.04	23.79	23.52	24.27	24.74	22.58	23.34	23.06	23.82	24.29
8H	4H	22.40	23.25	22.86	23.69	24.16	22.02	22.86	22.48	23.31	23.77
	6H	23.10	23.80	23.60	24.29	24.77	22.72	23.42	23.21	23.91	24.38
	8H	23.36	23.99	23.87	24.49	24.98	22.96	23.59	23.47	24.10	24.59
	12H	23.56	24.12	24.07	24.61	25.17	23.14	23.70	23.65	24.19	24.75
12H	4H	22.43	23.19	22.91	23.66	24.13	22.05	22.81	22.53	23.29	23.76
	6H	23.14	23.78	23.65	24.28	24.77	22.77	23.40	23.28	23.91	24.40
	8H	23.45	24.01	23.96	24.50	25.06	23.07	23.63	23.58	24.12	24.68