

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: P243125

Luminaire Tested: S122DRP-H485D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243125
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-H485D840-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

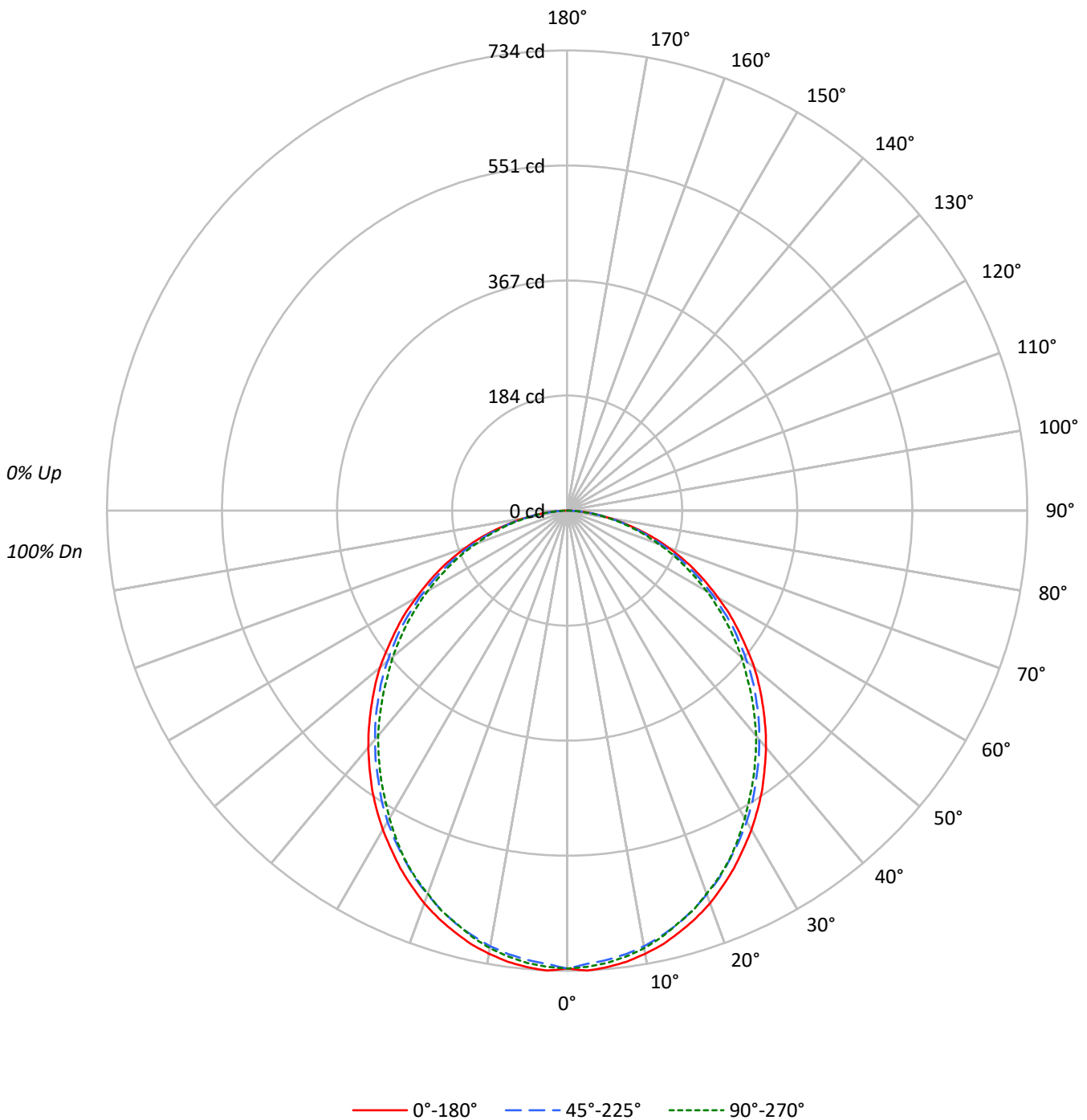
Lumens per Lamp: N/A
Luminaire Lumens: 1858.8 lumens
Efficiency: N/A
Efficacy: 108.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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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	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°	13914	13914	13914
5°	13981	13761	13851
10°	13881	13647	13711
15°	13715	13463	13449
20°	13510	13210	13184
25°	13230	12904	12890
30°	12928	12601	12469
35°	12617	12210	12054
40°	12271	11853	11669
45°	11898	11481	11190
50°	11551	11092	10754
55°	11068	10687	10285
60°	10594	10183	9798
65°	10136	9650	9226
70°	9523	9039	8588
75°	8669	8324	7926
80°	7536	7316	7020
85°	6469	5748	5289

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11898 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.8	3.7
10°-20°	193.6	10.4
20°-30°	284.6	15.3
30°-40°	330.5	17.8
40°-50°	330.1	17.8
50°-60°	287.5	15.5
60°-70°	212.6	11.4
70°-80°	119.8	6.4
80°-90°	31.3	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°	547.0	29.4
0°-40°	877.5	47.2
0°-60°	1495.1	80.4
0°-90°	1858.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1858.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	730	730	730	730	730	
5°	731	728	720	726	724	69
15°	696	692	683	685	682	196
25°	630	624	614	613	613	290
35°	543	537	525	520	518	339
45°	442	437	426	419	415	341
55°	333	331	322	313	310	299
65°	225	222	214	207	205	222
75°	118	117	113	109	108	125
85°	30	28	26	25	24	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	730.5	730.5	730.5	730.5	730.5
2.5°	734.5	731.2	723.8	729.8	728.5
5°	731.2	727.8	719.7	725.8	724.4
7.5°	725.8	722.4	713.7	719.7	717.7
10°	717.7	713.7	705.6	709.6	708.9
12.5°	708.3	704.2	694.8	698.2	696.8
15°	695.5	692.1	682.7	685.4	682.0
17.5°	682.0	676.6	667.9	670.6	668.5
20°	666.5	661.1	651.7	653.1	650.4
22.5°	648.3	643.0	634.2	634.2	632.9
25°	629.5	624.1	614.0	613.3	613.3
27.5°	608.6	603.9	593.8	591.8	590.4
30°	587.8	583.7	572.9	568.9	566.9
32.5°	565.5	560.2	550.1	545.3	542.0
35°	542.6	536.6	525.1	520.4	518.4
37.5°	517.7	511.7	501.6	497.5	493.5
40°	493.5	488.1	476.7	470.6	469.3
42.5°	467.9	462.5	452.4	445.7	441.7
45°	441.7	436.9	426.2	419.4	415.4
47.5°	416.1	410.7	401.3	393.2	387.8
50°	389.8	384.4	374.3	364.9	362.9
52.5°	360.9	357.5	347.4	338.6	336.0
55°	333.3	330.6	321.8	313.1	309.7
57.5°	307.0	303.6	293.5	286.8	282.8
60°	278.1	276.0	267.3	259.9	257.2
62.5°	251.1	248.4	241.0	233.6	230.3
65°	224.9	221.5	214.1	207.4	204.7
67.5°	197.9	194.6	188.5	183.1	180.4
70°	171.0	168.3	162.3	157.5	154.2
72.5°	144.8	142.1	136.7	132.0	131.3
75°	117.8	117.1	113.1	109.1	107.7
77.5°	92.9	92.2	89.5	87.5	86.2
80°	68.7	68.7	66.7	64.6	64.0
82.5°	47.1	47.8	45.8	44.4	44.4
85°	29.6	28.3	26.3	24.9	24.2
87.5°	12.1	10.1	9.4	7.4	6.7
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	20.43	22.04	20.80	22.36	22.67	20.00	21.61	20.37	21.93	22.24
	3H	22.18	23.64	22.56	23.96	24.33	21.70	23.16	22.08	23.48	23.84
	4H	22.83	24.20	23.23	24.55	24.92	22.33	23.70	22.73	24.05	24.42
	6H	23.29	24.56	23.70	24.92	25.31	22.79	24.06	23.20	24.42	24.81
	8H	23.43	24.64	23.85	25.03	25.43	22.93	24.14	23.36	24.53	24.93
	12H	23.52	24.68	23.95	25.06	25.49	23.01	24.17	23.44	24.55	24.98
4H	2H	20.99	22.36	21.39	22.71	23.08	20.65	22.02	21.05	22.37	22.74
	3H	22.97	24.11	23.38	24.51	24.91	22.57	23.71	22.98	24.11	24.51
	4H	23.75	24.78	24.18	25.20	25.63	23.31	24.35	23.75	24.76	25.20
	6H	24.33	25.24	24.79	25.68	26.13	23.90	24.80	24.35	25.24	25.70
	8H	24.52	25.36	24.98	25.80	26.27	24.08	24.93	24.54	25.37	25.83
	12H	24.65	25.41	25.13	25.89	26.36	24.20	24.96	24.68	25.43	25.90
8H	4H	24.02	24.86	24.48	25.31	25.77	23.64	24.48	24.10	24.92	25.39
	6H	24.72	25.42	25.21	25.91	26.38	24.33	25.03	24.83	25.52	26.00
	8H	24.97	25.60	25.48	26.11	26.60	24.58	25.21	25.09	25.72	26.20
	12H	25.18	25.73	25.68	26.23	26.79	24.76	25.31	25.26	25.81	26.37
12H	4H	24.04	24.80	24.52	25.28	25.75	23.67	24.43	24.15	24.91	25.37
	6H	24.76	25.39	25.27	25.90	26.39	24.39	25.02	24.90	25.53	26.01
	8H	25.07	25.63	25.58	26.12	26.68	24.69	25.25	25.20	25.74	26.30