

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: P243131

Luminaire Tested: S122DRP-H675D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243131
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-H675D930-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

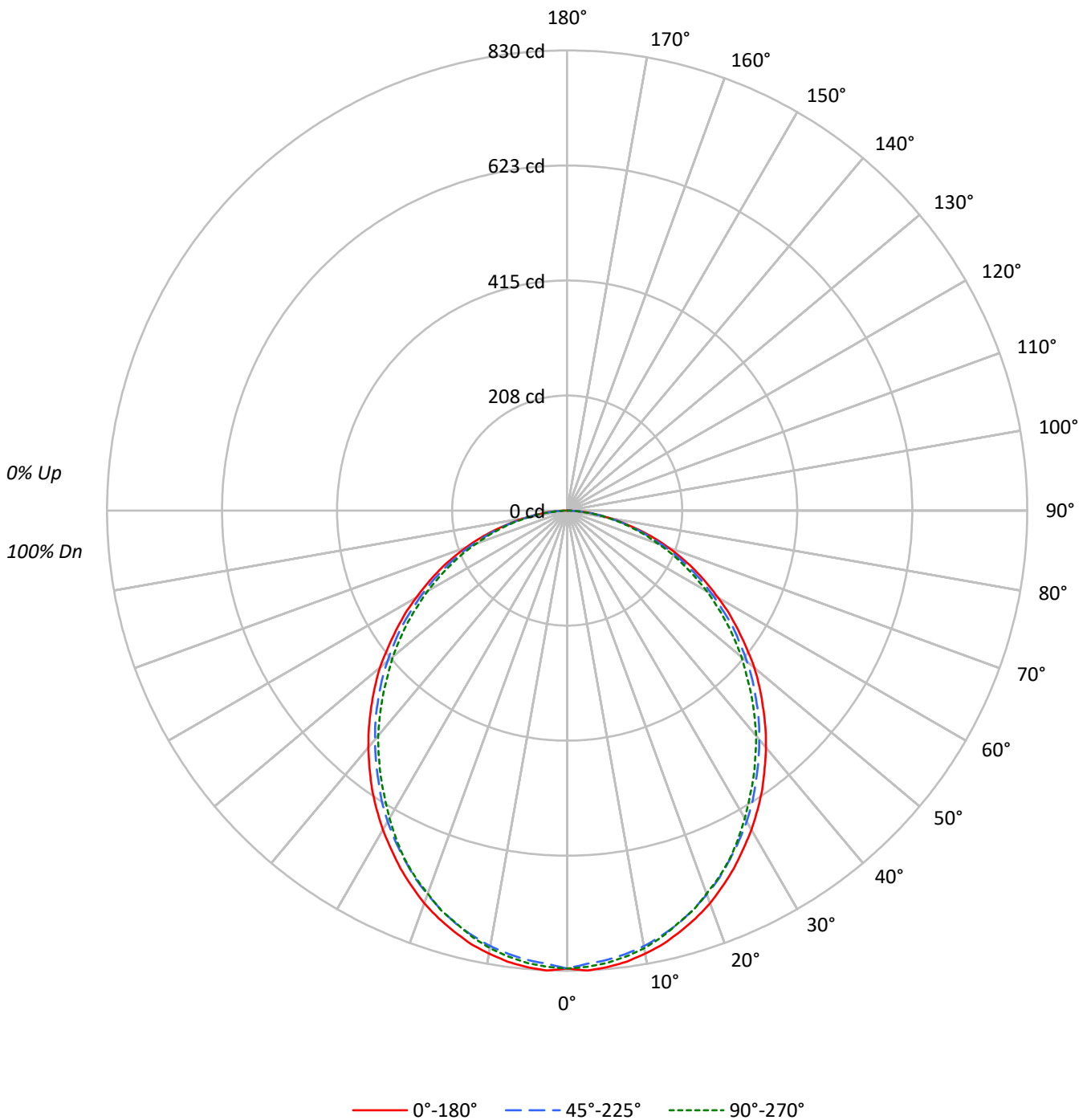
Lumens per Lamp: N/A
Luminaire Lumens: 2101.7 lumens
Efficiency: N/A
Efficacy: 89.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 23.6
Input Voltage (V): 120
Input Current (A_{in}): 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°	15732	15732	15732
5°	15807	15560	15662
10°	15696	15431	15504
15°	15506	15222	15206
20°	15276	14937	14905
25°	14958	14590	14575
30°	14617	14248	14098
35°	14268	13808	13629
40°	13875	13402	13193
45°	13453	12981	12653
50°	13062	12541	12158
55°	12513	12085	11630
60°	11977	11512	11078
65°	11461	10912	10429
70°	10771	10219	9707
75°	9803	9413	8964
80°	8512	8271	7931
85°	7321	6491	5988

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13453 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.8	3.7
10°-20°	218.9	10.4
20°-30°	321.9	15.3
30°-40°	373.7	17.8
40°-50°	373.2	17.8
50°-60°	325.0	15.5
60°-70°	240.4	11.4
70°-80°	135.5	6.4
80°-90°	35.3	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°	618.5	29.4
0°-40°	992.2	47.2
0°-60°	1690.5	80.4
0°-90°	2101.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2101.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	826	826	826	826	826	
5°	827	823	814	821	819	78
15°	786	782	772	775	771	222
25°	712	706	694	694	694	328
35°	614	607	594	588	586	383
45°	499	494	482	474	470	386
55°	377	374	364	354	350	337
65°	254	250	242	234	231	251
75°	133	132	128	123	122	142
85°	34	32	30	28	27	38
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	825.9	825.9	825.9	825.9	825.9
2.5°	830.5	826.7	818.3	825.2	823.7
5°	826.7	822.9	813.8	820.6	819.1
7.5°	820.6	816.8	806.9	813.8	811.5
10°	811.5	806.9	797.8	802.3	801.6
12.5°	800.8	796.2	785.6	789.4	787.9
15°	786.3	782.5	771.9	774.9	771.1
17.5°	771.1	765.0	755.1	758.2	755.9
20°	753.6	747.5	736.9	738.4	735.3
22.5°	733.1	727.0	717.1	717.1	715.6
25°	711.7	705.7	694.2	693.5	693.5
27.5°	688.2	682.8	671.4	669.1	667.6
30°	664.6	660.0	647.8	643.2	641.0
32.5°	639.4	633.3	621.9	616.6	612.8
35°	613.6	606.7	593.8	588.4	586.1
37.5°	585.4	578.5	567.1	562.5	558.0
40°	558.0	551.9	539.0	532.1	530.6
42.5°	529.1	523.0	511.5	503.9	499.4
45°	499.4	494.0	481.9	474.2	469.7
47.5°	470.4	464.3	453.7	444.6	438.5
50°	440.8	434.7	423.2	412.6	410.3
52.5°	408.0	404.2	392.8	382.9	379.9
55°	376.8	373.8	363.9	354.0	350.2
57.5°	347.1	343.3	331.9	324.3	319.7
60°	314.4	312.1	302.2	293.8	290.8
62.5°	283.9	280.9	272.5	264.1	260.3
65°	254.3	250.4	242.1	234.5	231.4
67.5°	223.8	220.0	213.1	207.1	204.0
70°	193.4	190.3	183.5	178.1	174.3
72.5°	163.7	160.6	154.5	149.2	148.4
75°	133.2	132.5	127.9	123.3	121.8
77.5°	105.0	104.3	101.2	99.0	97.4
80°	77.6	77.6	75.4	73.1	72.3
82.5°	53.3	54.0	51.8	50.2	50.2
85°	33.5	32.0	29.7	28.2	27.4
87.5°	13.7	11.4	10.7	8.4	7.6
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	20.86	22.47	21.22	22.78	23.10	20.43	22.04	20.80	22.35	22.67
	3H	22.61	24.07	22.99	24.39	24.75	22.13	23.58	22.51	23.91	24.27
	4H	23.26	24.63	23.66	24.97	25.35	22.76	24.13	23.16	24.47	24.85
	6H	23.72	24.98	24.13	25.35	25.74	23.22	24.49	23.63	24.85	25.24
	8H	23.85	25.06	24.28	25.45	25.85	23.36	24.57	23.78	24.96	25.36
	12H	23.95	25.11	24.38	25.49	25.92	23.44	24.60	23.87	24.98	25.41
4H	2H	21.42	22.79	21.82	23.13	23.51	21.08	22.45	21.48	22.79	23.17
	3H	23.39	24.54	23.80	24.94	25.34	22.99	24.14	23.40	24.54	24.94
	4H	24.17	25.21	24.61	25.62	26.06	23.74	24.78	24.17	25.19	25.63
	6H	24.76	25.66	25.21	26.10	26.56	24.32	25.23	24.78	25.67	26.12
	8H	24.94	25.79	25.40	26.23	26.70	24.51	25.35	24.97	25.80	26.26
	12H	25.08	25.84	25.56	26.31	26.78	24.62	25.38	25.10	25.86	26.33
8H	4H	24.44	25.29	24.91	25.73	26.20	24.06	24.91	24.52	25.35	25.82
	6H	25.15	25.85	25.64	26.34	26.81	24.76	25.46	25.25	25.95	26.43
	8H	25.40	26.03	25.91	26.54	27.02	25.01	25.64	25.52	26.14	26.63
	12H	25.60	26.16	26.11	26.65	27.21	25.18	25.74	25.69	26.23	26.79
12H	4H	24.47	25.23	24.95	25.70	26.17	24.10	24.86	24.58	25.33	25.80
	6H	25.19	25.82	25.70	26.33	26.81	24.81	25.45	25.32	25.95	26.44
	8H	25.50	26.05	26.00	26.54	27.11	25.12	25.67	25.62	26.17	26.73