

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: P243127

Luminaire Tested: S122DRP-H865D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243127
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-H865D840-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

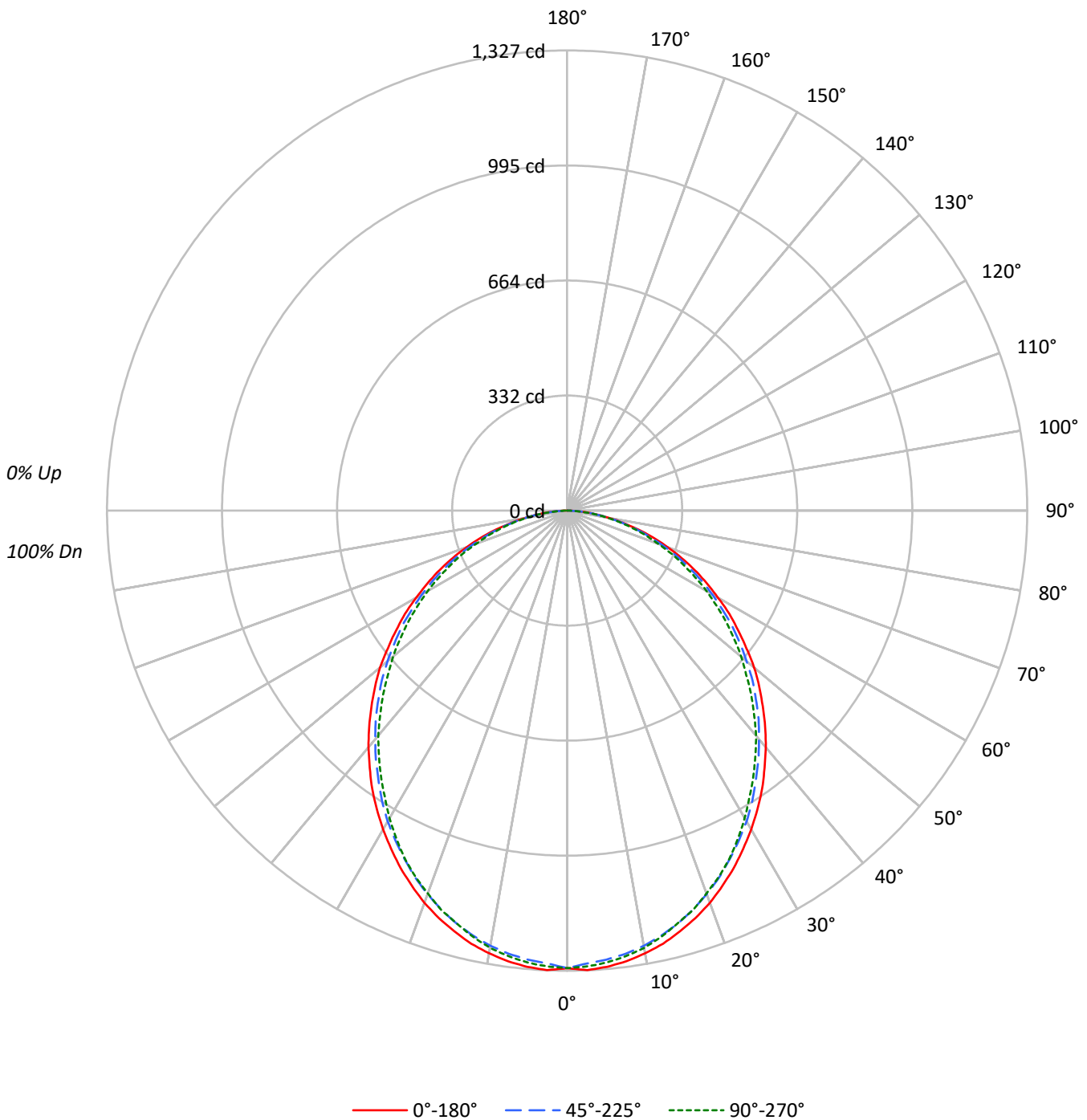
Lumens per Lamp: N/A
Luminaire Lumens: 3357.2 lumens
Efficiency: N/A
Efficacy: 106.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 31.5
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: P243127

CATALOG NUMBER: S122DRP-H865D840-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	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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84					84			
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71					71			
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60					60			
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51					51			
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45					45			
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39					39			
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35					35			
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	31					31			
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28					28			
10	54	41	33	28	53	40	33	28	39	32	28	38	32	27	37	32	27	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25130	25130	25130
5°	25250	24855	25017
10°	25071	24647	24765
15°	24770	24314	24291
20°	24401	23860	23809
25°	23894	23308	23282
30°	23347	22760	22520
35°	22790	22055	21772
40°	22162	21406	21073
45°	21488	20734	20211
50°	20865	20035	19421
55°	19988	19301	18577
60°	19132	18389	17695
65°	18303	17429	16663
70°	17203	16323	15510
75°	15661	15035	14322
80°	13602	13207	12669
85°	11692	10359	9572

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 21488 cd/sqm



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CATALOG NUMBER: S122DRP-H865D840-X4F0-XX-UDD-F-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.2	3.7
10°-20°	349.7	10.4
20°-30°	514.1	15.3
30°-40°	597.0	17.8
40°-50°	596.1	17.8
50°-60°	519.2	15.5
60°-70°	384.0	11.4
70°-80°	216.4	6.4
80°-90°	56.4	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°	988.0	29.4
0°-40°	1585.0	47.2
0°-60°	2700.3	80.4
0°-90°	3357.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3357.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1319	1319	1319	1319	1319	
5°	1321	1314	1300	1311	1308	125
15°	1256	1250	1233	1238	1232	354
25°	1137	1127	1109	1108	1108	523
35°	980	969	948	940	936	612
45°	798	789	770	758	750	616
55°	602	597	581	565	559	539
65°	406	400	387	374	370	401
75°	213	212	204	197	195	226
85°	54	51	47	45	44	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1319.3	1319.3	1319.3	1319.3	1319.3
2.5°	1326.6	1320.6	1307.2	1318.1	1315.7
5°	1320.6	1314.5	1299.9	1310.8	1308.4
7.5°	1310.8	1304.7	1288.9	1299.9	1296.2
10°	1296.2	1288.9	1274.3	1281.6	1280.4
12.5°	1279.2	1271.9	1254.9	1261.0	1258.5
15°	1256.1	1250.0	1233.0	1237.9	1231.8
17.5°	1231.8	1222.1	1206.3	1211.1	1207.5
20°	1203.8	1194.1	1177.1	1179.5	1174.6
22.5°	1171.0	1161.3	1145.5	1145.5	1143.0
25°	1136.9	1127.2	1109.0	1107.8	1107.8
27.5°	1099.2	1090.7	1072.5	1068.8	1066.4
30°	1061.5	1054.3	1034.8	1027.5	1023.9
32.5°	1021.4	1011.7	993.5	984.9	978.9
35°	980.1	969.1	948.5	940.0	936.3
37.5°	935.1	924.1	905.9	898.6	891.3
40°	891.3	881.6	860.9	850.0	847.5
42.5°	845.1	835.4	817.1	805.0	797.7
45°	797.7	789.2	769.7	757.6	750.3
47.5°	751.5	741.7	724.7	710.1	700.4
50°	704.1	694.3	676.1	659.1	655.4
52.5°	651.8	645.7	627.4	611.6	606.8
55°	601.9	597.0	581.2	565.4	559.4
57.5°	554.5	548.4	530.2	518.0	510.7
60°	502.2	498.6	482.7	469.4	464.5
62.5°	453.6	448.7	435.3	421.9	415.9
65°	406.1	400.1	386.7	374.5	369.7
67.5°	357.5	351.4	340.5	330.7	325.9
70°	308.9	304.0	293.1	284.5	278.5
72.5°	261.4	256.6	246.8	238.3	237.1
75°	212.8	211.6	204.3	197.0	194.6
77.5°	167.8	166.6	161.7	158.1	155.6
80°	124.0	124.0	120.4	116.7	115.5
82.5°	85.1	86.3	82.7	80.3	80.3
85°	53.5	51.1	47.4	45.0	43.8
87.5°	21.9	18.2	17.0	13.4	12.2
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	22.49	24.10	22.85	24.41	24.72	22.06	23.67	22.42	23.98	24.30
	3H	24.24	25.69	24.62	26.02	26.38	23.76	25.21	24.14	25.54	25.90
	4H	24.89	26.25	25.28	26.60	26.98	24.38	25.75	24.78	26.10	26.48
	6H	25.34	26.61	25.75	26.98	27.37	24.84	26.11	25.26	26.48	26.87
	8H	25.48	26.69	25.91	27.08	27.48	24.99	26.20	25.41	26.58	26.98
	12H	25.57	26.73	26.00	27.11	27.54	25.07	26.23	25.50	26.61	27.04
4H	2H	23.05	24.41	23.44	24.76	25.14	22.70	24.07	23.10	24.42	24.80
	3H	25.02	26.17	25.43	26.56	26.96	24.62	25.77	25.03	26.16	26.56
	4H	25.80	26.84	26.23	27.25	27.69	25.37	26.40	25.80	26.82	27.25
	6H	26.39	27.29	26.84	27.73	28.19	25.95	26.85	26.41	27.30	27.75
	8H	26.57	27.42	27.03	27.86	28.32	26.13	26.98	26.60	27.42	27.89
	12H	26.71	27.46	27.19	27.94	28.41	26.25	27.01	26.73	27.49	27.96
8H	4H	26.07	26.92	26.53	27.36	27.83	25.69	26.54	26.15	26.98	27.44
	6H	26.77	27.48	27.27	27.96	28.44	26.39	27.09	26.88	27.58	28.05
	8H	27.03	27.66	27.54	28.16	28.65	26.64	27.27	27.15	27.77	28.26
	12H	27.23	27.79	27.74	28.28	28.84	26.81	27.37	27.32	27.86	28.42
12H	4H	26.10	26.86	26.58	27.33	27.80	25.72	26.48	26.20	26.96	27.43
	6H	26.82	27.45	27.32	27.95	28.44	26.44	27.07	26.95	27.58	28.07
	8H	27.12	27.68	27.63	28.17	28.73	26.75	27.30	27.25	27.79	28.35