

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: P242268

Luminaire Tested: S122DRP-S1005D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242268  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DRP-S1005D840-X4F0-XX-UDD-F-W  
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

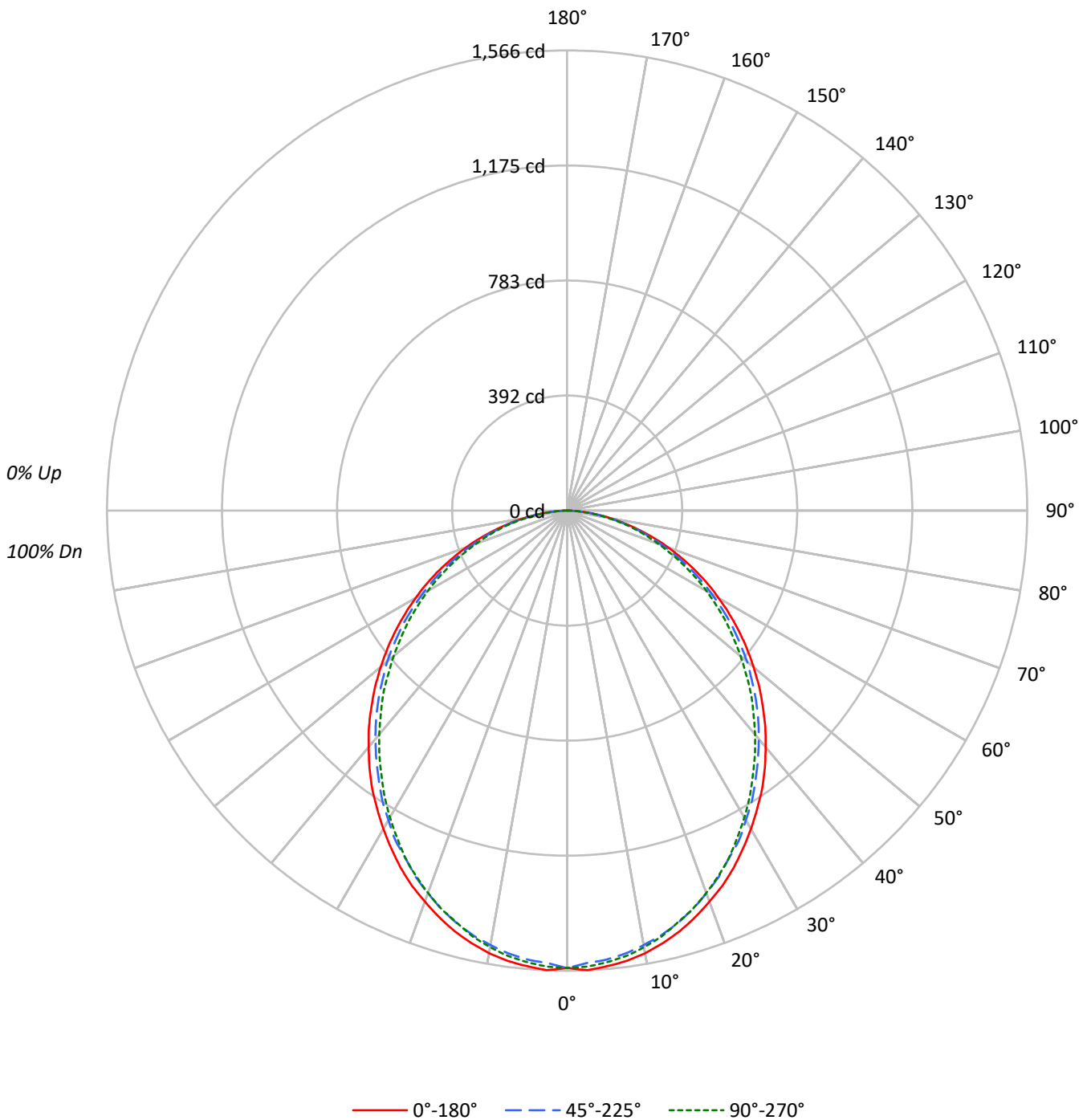
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3960.2 lumens  
Efficiency: N/A  
Efficacy: 96.4 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): 41.1  
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	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	27	38	32	27	37	32	27	26					26			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	29650	29650	29650
5°	29763	29333	29505
10°	29585	29036	29181
15°	29219	28659	28629
20°	28701	28092	28062
25°	28184	27398	27398
30°	27519	26763	26532
35°	26901	25997	25615
40°	26126	25233	24748
45°	25359	24473	23867
50°	24527	23683	22841
55°	23658	22765	21918
60°	22693	21665	20869
65°	21652	20575	19628
70°	20339	19253	18339
75°	18502	17736	17295
80°	16421	15927	15105
85°	13419	12763	11452

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 25359 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	146.5	3.7
10°-20°	412.2	10.4
20°-30°	605.7	15.3
30°-40°	703.5	17.8
40°-50°	702.7	17.7
50°-60°	612.7	15.5
60°-70°	452.9	11.4
70°-80°	256.3	6.5
80°-90°	67.6	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°	1164.4	29.4
0°-40°	1868.0	47.2
0°-60°	3183.4	80.4
0°-90°	3960.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3960.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1557	1557	1557	1557	1557	
5°	1557	1551	1534	1546	1543	148
15°	1482	1473	1453	1459	1452	417
25°	1341	1329	1304	1307	1304	617
35°	1157	1142	1118	1109	1102	722
45°	941	931	908	892	886	727
55°	712	703	686	668	660	637
65°	480	472	456	443	436	475
75°	251	248	241	232	235	268
85°	61	60	58	54	52	72
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1556.6	1556.6	1556.6	1556.6	1556.6
2.5°	1565.5	1558.1	1541.6	1556.6	1553.6
5°	1556.6	1550.6	1534.1	1546.1	1543.1
7.5°	1546.1	1537.1	1520.6	1532.6	1529.6
10°	1529.6	1519.2	1501.2	1513.2	1508.7
12.5°	1507.2	1498.2	1480.2	1487.7	1484.7
15°	1481.7	1472.8	1453.3	1459.3	1451.8
17.5°	1450.3	1441.3	1421.9	1429.3	1421.9
20°	1415.9	1406.9	1385.9	1390.4	1384.4
22.5°	1381.5	1368.0	1348.5	1348.5	1345.5
25°	1341.0	1329.1	1303.6	1306.6	1303.6
27.5°	1296.1	1285.7	1266.2	1261.7	1254.2
30°	1251.2	1239.3	1216.8	1212.3	1206.3
32.5°	1203.3	1194.4	1170.4	1161.4	1155.5
35°	1156.9	1142.0	1118.0	1109.1	1101.6
37.5°	1104.6	1091.1	1067.1	1056.7	1049.2
40°	1050.7	1038.7	1014.8	1001.3	995.3
42.5°	998.3	986.3	962.4	947.4	938.4
45°	941.4	930.9	908.5	892.0	886.0
47.5°	886.0	875.6	851.6	835.2	826.2
50°	827.7	820.2	799.2	778.3	770.8
52.5°	770.8	760.3	740.9	724.4	713.9
55°	712.4	703.4	685.5	667.5	660.0
57.5°	654.1	646.6	627.1	609.2	603.2
60°	595.7	589.7	568.7	552.3	547.8
62.5°	538.8	528.3	513.4	498.4	492.4
65°	480.4	471.5	456.5	443.0	435.5
67.5°	420.6	413.1	399.6	389.1	383.2
70°	365.2	359.2	345.7	335.3	329.3
72.5°	308.3	302.3	294.8	284.4	279.9
75°	251.4	248.5	241.0	232.0	235.0
77.5°	200.6	194.6	191.6	187.1	182.6
80°	149.7	148.2	145.2	140.7	137.7
82.5°	101.8	101.8	100.3	94.3	94.3
85°	61.4	59.9	58.4	53.9	52.4
87.5°	26.9	23.9	21.0	16.5	15.0
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	23.06	24.67	23.42	24.98	25.30	22.61	24.23	22.98	24.54	24.85
	3H	24.81	26.26	25.19	26.59	26.95	24.32	25.77	24.69	26.10	26.46
	4H	25.45	26.82	25.85	27.17	27.55	24.96	26.33	25.36	26.68	27.05
	6H	25.92	27.19	26.34	27.56	27.95	25.42	26.69	25.83	27.06	27.45
	8H	26.07	27.28	26.49	27.67	28.07	25.56	26.78	25.99	27.16	27.56
	12H	26.16	27.32	26.59	27.70	28.13	25.65	26.81	26.07	27.19	27.62
4H	2H	23.62	24.99	24.02	25.34	25.71	23.27	24.64	23.66	24.98	25.36
	3H	25.59	26.74	26.00	27.14	27.54	25.19	26.33	25.60	26.73	27.13
	4H	26.37	27.41	26.80	27.82	28.26	25.95	26.98	26.38	27.40	27.83
	6H	26.97	27.87	27.42	28.31	28.77	26.54	27.44	26.99	27.88	28.34
	8H	27.16	28.00	27.62	28.45	28.91	26.72	27.57	27.18	28.01	28.47
	12H	27.29	28.05	27.77	28.52	28.99	26.84	27.60	27.32	28.07	28.54
8H	4H	26.64	27.49	27.10	27.93	28.40	26.27	27.12	26.73	27.56	28.02
	6H	27.36	28.06	27.85	28.55	29.03	26.98	27.68	27.47	28.17	28.64
	8H	27.62	28.25	28.13	28.76	29.24	27.23	27.86	27.74	28.36	28.85
	12H	27.82	28.38	28.32	28.87	29.43	27.40	27.96	27.91	28.45	29.01
12H	4H	26.67	27.43	27.15	27.91	28.38	26.31	27.07	26.79	27.54	28.01
	6H	27.40	28.04	27.91	28.54	29.03	27.04	27.67	27.54	28.17	28.66
	8H	27.72	28.28	28.22	28.77	29.33	27.34	27.90	27.85	28.39	28.95