

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: P242886

Luminaire Tested: S125RDRP-S1090D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242886  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-27)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125RDRP-S1090D840-X4F0-XX-UDD-F-W  
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

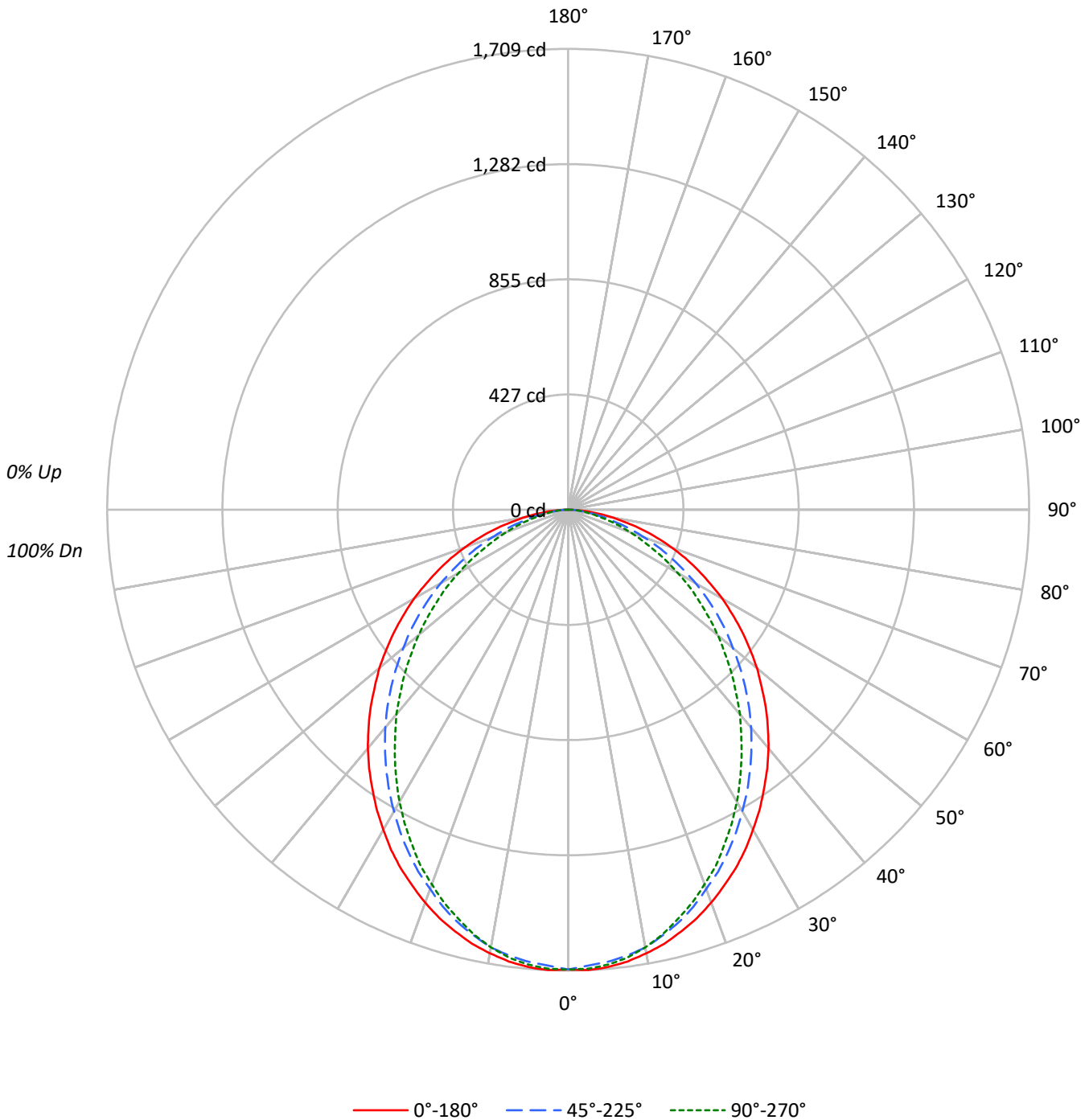
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4028.5 lumens  
Efficiency: N/A  
Efficacy: 115.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.11 / 1.25  
Luminous Opening: Rectangular (W 0.39' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 34.8  
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	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	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85																												
2	100	92	86	80	98	90	84	79	87	82	78	84	79	76	81	77	74	72																												
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61																												
4	84	73	64	58	82	71	64	57	69	62	57	67	61	56	64	59	55	53																												
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46																												
6	72	59	50	44	70	58	50	44	56	49	44	55	48	43	53	47	43	41																												
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	36																												
8	62	49	41	35	61	48	41	35	47	40	35	46	39	35	45	39	34	33																												
9	58	45	37	32	57	45	37	32	44	37	32	42	36	31	41	36	31	29																												
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	27																												

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

	0°	45°	90°
0°	12119	12119	12119
5°	12146	12009	12082
10°	12055	11896	11896
15°	11911	11655	11560
20°	11727	11319	11182
25°	11513	10988	10745
30°	11245	10601	10263
35°	10972	10202	9721
40°	10718	9785	9188
45°	10407	9320	8608
50°	10096	8815	8003
55°	9735	8329	7357
60°	9373	7744	6664
65°	8945	7060	5869
70°	8458	6209	5058
75°	7780	5234	4210
80°	6852	4113	3532
85°	5774	3360	3148

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 10407 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	160.5	4.0
10°-20°	448.5	11.1
20°-30°	650.3	16.1
30°-40°	740.8	18.4
40°-50°	722.1	17.9
50°-60°	607.7	15.1
60°-70°	425.9	10.6
70°-80°	218.3	5.4
80°-90°	54.4	1.4
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°	1259.2	31.3
0°-40°	2000.1	49.6
0°-60°	3329.9	82.7
0°-90°	4028.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4028.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1705	1705	1705	1705	1705	
5°	1702	1697	1683	1696	1694	161
15°	1619	1611	1584	1583	1571	456
25°	1468	1449	1401	1384	1370	676
35°	1265	1234	1176	1138	1120	792
45°	1035	998	927	876	856	799
55°	786	744	672	614	594	702
65°	532	488	420	368	349	527
75°	283	245	191	162	153	299
85°	71	48	41	40	39	82
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1705.1	1705.1	1705.1	1705.1	1705.1
2.5°	1708.9	1705.1	1692.2	1705.1	1703.8
5°	1702.5	1697.4	1683.2	1696.1	1693.5
7.5°	1689.6	1684.5	1667.7	1678.0	1675.5
10°	1670.3	1666.4	1648.4	1652.3	1648.4
12.5°	1648.4	1643.3	1617.5	1620.1	1613.6
15°	1618.8	1611.1	1584.0	1582.7	1571.1
17.5°	1587.9	1576.3	1544.1	1537.7	1528.6
20°	1550.5	1537.7	1496.5	1490.0	1478.4
22.5°	1509.3	1496.5	1452.7	1438.5	1429.5
25°	1468.1	1448.8	1401.2	1384.4	1370.2
27.5°	1421.8	1398.6	1348.4	1326.5	1312.3
30°	1370.2	1345.8	1291.7	1262.1	1250.5
32.5°	1320.0	1290.4	1235.0	1201.5	1186.1
35°	1264.6	1233.7	1175.8	1138.4	1120.4
37.5°	1211.8	1174.5	1115.3	1071.5	1053.4
40°	1155.2	1116.5	1054.7	1005.8	990.3
42.5°	1095.9	1056.0	991.6	945.3	920.8
45°	1035.4	998.1	927.2	875.7	856.4
47.5°	972.3	933.7	862.8	810.0	788.1
50°	913.1	870.6	797.2	743.1	723.8
52.5°	848.7	804.9	736.6	677.4	658.1
55°	785.6	744.4	672.2	614.3	593.7
57.5°	721.2	677.4	607.9	551.2	533.2
60°	659.4	614.3	544.8	488.1	468.8
62.5°	593.7	551.2	480.4	428.8	409.5
65°	531.9	488.1	419.8	368.3	349.0
67.5°	470.1	426.3	360.6	311.7	296.2
70°	407.0	363.2	298.8	258.9	243.4
72.5°	345.1	302.6	243.4	207.3	198.3
75°	283.3	244.7	190.6	162.3	153.3
77.5°	220.2	189.3	144.2	122.3	114.6
80°	167.4	136.5	100.5	88.9	86.3
82.5°	115.9	88.9	67.0	63.1	61.8
85°	70.8	47.6	41.2	39.9	38.6
87.5°	29.6	20.6	19.3	19.3	18.0
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	20.01	21.58	20.37	21.90	22.21	18.44	20.02	18.80	20.33	20.64
	3H	21.79	23.21	22.17	23.54	23.90	19.75	21.17	20.13	21.50	21.86
	4H	22.45	23.79	22.85	24.13	24.51	20.16	21.50	20.56	21.84	22.22
	6H	22.92	24.16	23.33	24.52	24.91	20.42	21.65	20.83	22.02	22.41
	8H	23.07	24.25	23.50	24.64	25.04	20.50	21.68	20.93	22.07	22.47
	12H	23.17	24.30	23.60	24.68	25.11	20.56	21.68	20.99	22.06	22.49
4H	2H	20.40	21.73	20.80	22.08	22.46	19.13	20.46	19.53	20.81	21.19
	3H	22.38	23.49	22.79	23.89	24.29	20.63	21.74	21.04	22.14	22.54
	4H	23.17	24.17	23.60	24.58	25.02	21.12	22.12	21.55	22.54	22.98
	6H	23.76	24.63	24.21	25.07	25.53	21.47	22.34	21.92	22.78	23.24
	8H	23.95	24.77	24.41	25.21	25.68	21.58	22.39	22.04	22.84	23.30
	12H	24.09	24.82	24.57	25.30	25.77	21.66	22.39	22.14	22.87	23.34
8H	4H	23.29	24.11	23.75	24.55	25.01	21.44	22.25	21.90	22.70	23.16
	6H	23.97	24.64	24.46	25.13	25.61	21.86	22.54	22.36	23.03	23.50
	8H	24.21	24.82	24.72	25.33	25.81	22.02	22.63	22.53	23.13	23.62
	12H	24.41	24.94	24.92	25.44	26.00	22.16	22.70	22.67	23.19	23.75
12H	4H	23.28	24.01	23.76	24.49	24.96	21.47	22.21	21.96	22.68	23.15
	6H	23.96	24.57	24.47	25.07	25.56	21.91	22.52	22.42	23.03	23.51
	8H	24.25	24.78	24.76	25.27	25.84	22.12	22.65	22.63	23.15	23.71