

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: P242448

Luminaire Tested: S123DRP-S775D935-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242448  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DRP-S775D935-X4F0-XX-UDD-F-W  
Description: DEFINE 3 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

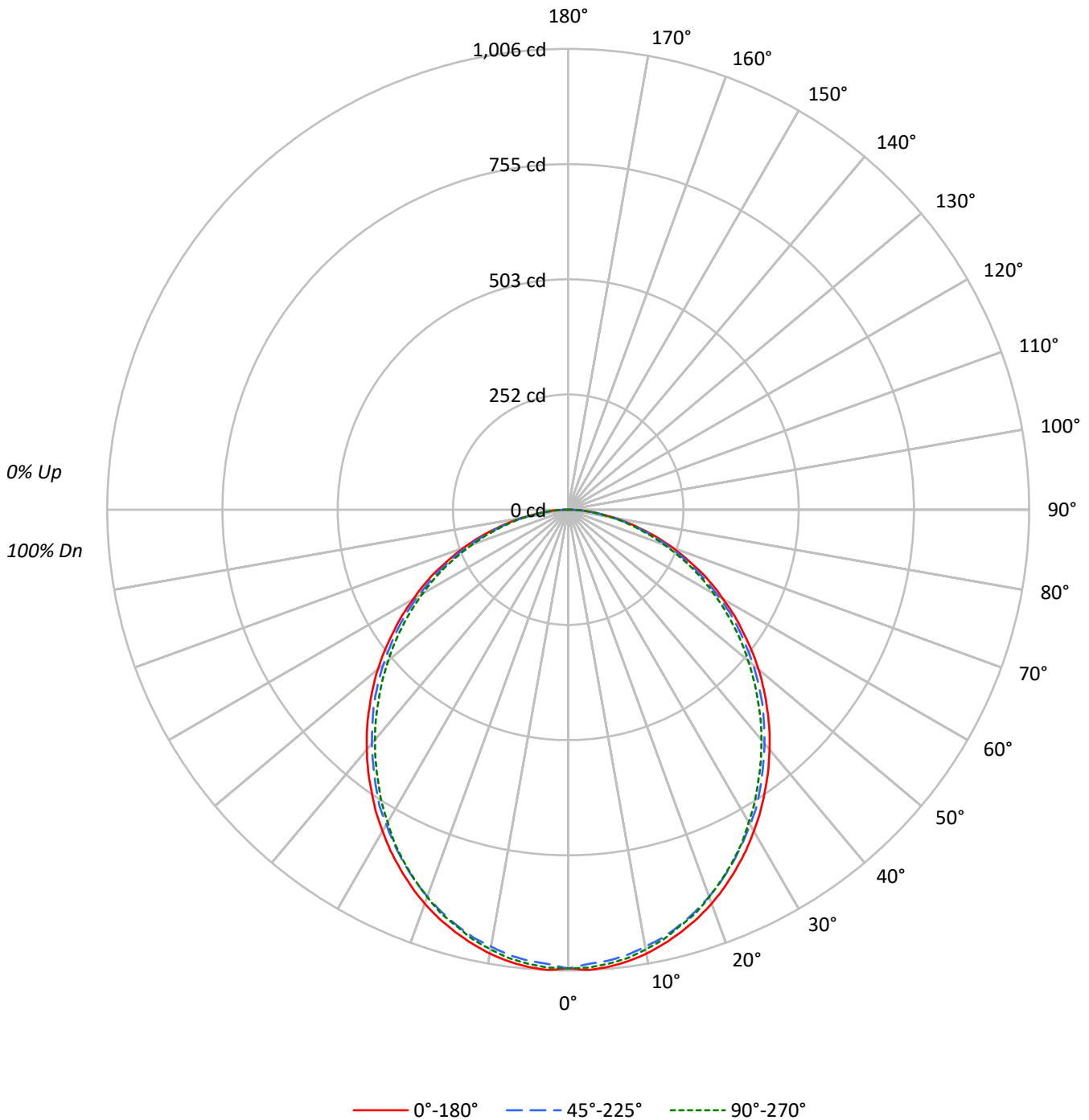
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2606.0 lumens  
Efficiency: N/A  
Efficacy: 98.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.3  
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 26.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	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	94	92	94	91	89	90	88	86	84				84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	72	70				70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	59				59
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51				51
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	57	51	46	44				44
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	46	41	39				39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34				34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31				31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28				28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25				25

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

	0°	45°	90°
0°	12137	12137	12137
5°	12194	12026	12110
10°	12113	11922	11997
15°	11972	11787	11810
20°	11805	11595	11605
25°	11585	11365	11343
30°	11340	11110	11026
35°	11085	10842	10701
40°	10817	10545	10382
45°	10523	10273	10021
50°	10228	9936	9661
55°	9844	9588	9298
60°	9455	9183	8892
65°	9112	8742	8470
70°	8605	8240	7871
75°	7863	7582	7259
80°	7092	6792	6729
85°	6231	5980	5744

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 10523 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.4	3.6
10°-20°	266.5	10.2
20°-30°	393.7	15.1
30°-40°	459.8	17.6
40°-50°	462.2	17.7
50°-60°	406.0	15.6
60°-70°	302.4	11.6
70°-80°	172.1	6.6
80°-90°	48.9	1.9
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°	754.6	29.0
0°-40°	1214.4	46.6
0°-60°	2082.6	79.9
0°-90°	2606.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2606.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1001	1001	1001	1001	1001	
5°	1002	998	988	997	995	95
15°	954	950	939	946	941	269
25°	866	861	850	851	848	399
35°	749	744	733	728	723	469
45°	614	610	599	589	585	474
55°	466	465	454	444	440	417
65°	318	313	305	298	295	313
75°	168	164	162	158	155	179
85°	45	43	43	41	41	51
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1001.3	1001.3	1001.3	1001.3	1001.3
2.5°	1005.6	1002.2	992.7	1001.3	1000.5
5°	1002.2	997.9	988.4	997.0	995.3
7.5°	994.5	990.1	980.7	988.4	987.6
10°	984.1	979.8	968.6	976.4	974.7
12.5°	970.3	966.9	956.6	961.7	960.9
15°	954.0	950.5	939.3	946.2	941.1
17.5°	935.9	931.6	920.4	925.6	923.9
20°	915.2	910.1	898.9	902.3	899.7
22.5°	892.0	886.8	875.6	878.2	874.8
25°	866.2	861.0	849.8	850.7	848.1
27.5°	839.5	834.3	822.3	823.1	820.5
30°	810.2	805.9	793.8	793.8	787.8
32.5°	780.9	774.9	766.3	760.3	757.7
35°	749.1	743.9	732.7	727.5	723.2
37.5°	717.2	710.3	699.1	693.1	690.5
40°	683.6	678.5	666.4	659.5	656.1
42.5°	650.1	644.0	632.0	625.1	621.6
45°	613.9	610.4	599.3	588.9	584.6
47.5°	578.6	573.4	563.1	552.8	549.3
50°	542.4	538.1	526.9	517.5	512.3
52.5°	504.5	502.0	489.9	482.2	477.0
55°	465.8	464.9	453.7	444.3	440.0
57.5°	429.6	426.2	417.6	409.0	403.8
60°	390.0	389.2	378.8	371.1	366.8
62.5°	354.7	352.1	341.8	334.1	331.5
65°	317.7	313.4	304.8	297.9	295.3
67.5°	278.1	274.7	267.8	261.7	258.3
70°	242.8	237.6	232.5	226.4	222.1
72.5°	205.8	202.3	196.3	191.1	189.4
75°	167.9	164.5	161.9	157.6	155.0
77.5°	134.3	132.6	129.1	125.7	125.7
80°	101.6	99.0	97.3	96.4	96.4
82.5°	69.7	69.7	69.7	68.0	67.2
85°	44.8	43.0	43.0	41.3	41.3
87.5°	22.4	19.8	18.9	18.1	18.1
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	20.03	21.65	20.40	21.96	22.28	19.72	21.34	20.08	21.65	21.96
	3H	21.80	23.26	22.18	23.59	23.95	21.43	22.89	21.81	23.22	23.58
	4H	22.46	23.84	22.86	24.18	24.56	22.07	23.45	22.47	23.79	24.17
	6H	22.95	24.22	23.36	24.59	24.98	22.56	23.83	22.97	24.20	24.59
	8H	23.10	24.32	23.52	24.71	25.11	22.72	23.93	23.14	24.32	24.72
	12H	23.21	24.37	23.64	24.76	25.18	22.82	23.99	23.25	24.37	24.80
4H	2H	20.61	21.99	21.01	22.33	22.71	20.36	21.74	20.76	22.09	22.46
	3H	22.60	23.76	23.01	24.15	24.55	22.30	23.45	22.71	23.85	24.25
	4H	23.39	24.43	23.82	24.84	25.28	23.06	24.10	23.49	24.52	24.95
	6H	24.01	24.92	24.46	25.36	25.81	23.67	24.58	24.13	25.02	25.48
	8H	24.21	25.06	24.67	25.50	25.97	23.88	24.73	24.34	25.17	25.64
	12H	24.36	25.13	24.84	25.60	26.07	24.03	24.79	24.51	25.27	25.74
8H	4H	23.67	24.53	24.13	24.97	25.43	23.38	24.23	23.84	24.68	25.14
	6H	24.41	25.12	24.90	25.61	26.08	24.12	24.83	24.61	25.31	25.79
	8H	24.68	25.32	25.19	25.83	26.31	24.40	25.03	24.91	25.54	26.03
	12H	24.91	25.47	25.42	25.96	26.53	24.62	25.18	25.13	25.67	26.23
12H	4H	23.70	24.47	24.18	24.94	25.41	23.42	24.18	23.90	24.66	25.13
	6H	24.46	25.10	24.97	25.60	26.09	24.18	24.81	24.69	25.32	25.81
	8H	24.79	25.36	25.30	25.85	26.41	24.52	25.08	25.02	25.57	26.13