

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: P242424

Luminaire Tested: S123DRP-S775D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242424  
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-S775D927-X4F0-XX-UDD-F-W  
Description: DEFINE 3 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

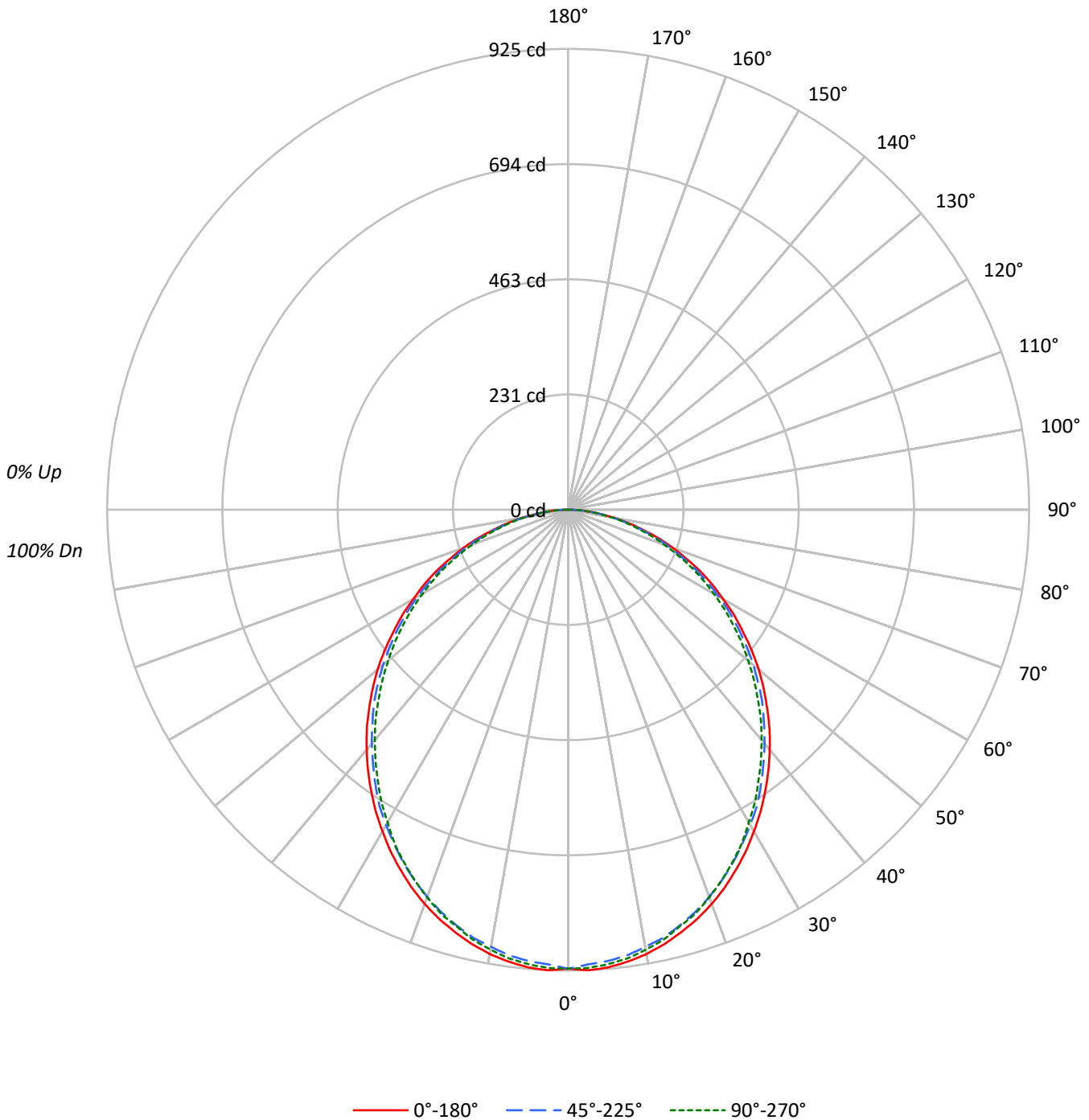
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2397.8 lumens  
Efficiency: N/A  
Efficacy: 90.8 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	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	94	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	72	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	57	51	46	44
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	46	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

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

	0°	45°	90°
0°	11167	11167	11167
5°	11220	11065	11143
10°	11145	10969	11037
15°	11014	10846	10866
20°	10862	10668	10678
25°	10658	10457	10436
30°	10433	10223	10145
35°	10198	9975	9846
40°	9953	9701	9551
45°	9682	9452	9221
50°	9412	9142	8887
55°	9057	8823	8555
60°	8701	8451	8182
65°	8384	8042	7793
70°	7917	7581	7244
75°	7236	6973	6678
80°	6527	6247	6192
85°	5730	5507	5285

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 9682 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.9	3.6
10°-20°	245.2	10.2
20°-30°	362.2	15.1
30°-40°	423.0	17.6
40°-50°	425.3	17.7
50°-60°	373.6	15.6
60°-70°	278.2	11.6
70°-80°	158.3	6.6
80°-90°	45.0	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°	694.3	29.0
0°-40°	1117.3	46.6
0°-60°	1916.2	79.9
0°-90°	2397.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2397.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	921	921	921	921	921	
5°	922	918	909	917	916	87
15°	878	875	864	871	866	248
25°	797	792	782	783	780	367
35°	689	684	674	669	665	431
45°	565	562	551	542	538	436
55°	429	428	418	409	405	384
65°	292	288	280	274	272	288
75°	154	151	149	145	143	165
85°	41	40	40	38	38	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	921.3	921.3	921.3	921.3	921.3
2.5°	925.3	922.1	913.4	921.3	920.5
5°	922.1	918.1	909.4	917.3	915.8
7.5°	915.0	911.0	902.3	909.4	908.6
10°	905.5	901.5	891.2	898.3	896.7
12.5°	892.8	889.6	880.1	884.9	884.1
15°	877.7	874.6	864.3	870.6	865.9
17.5°	861.1	857.1	846.8	851.6	850.0
20°	842.1	837.3	827.0	830.2	827.8
22.5°	820.7	815.9	805.6	808.0	804.9
25°	796.9	792.2	781.9	782.7	780.3
27.5°	772.4	767.6	756.5	757.3	754.9
30°	745.4	741.5	730.4	730.4	724.8
32.5°	718.5	713.0	705.0	699.5	697.1
35°	689.2	684.4	674.1	669.4	665.4
37.5°	659.9	653.5	643.3	637.7	635.3
40°	629.0	624.2	613.1	606.8	603.6
42.5°	598.1	592.6	581.5	575.1	572.0
45°	564.8	561.7	551.4	541.9	537.9
47.5°	532.3	527.6	518.1	508.6	505.4
50°	499.1	495.1	484.8	476.1	471.3
52.5°	464.2	461.8	450.8	443.6	438.9
55°	428.6	427.8	417.5	408.8	404.8
57.5°	395.3	392.1	384.2	376.3	371.5
60°	358.9	358.1	348.6	341.4	337.5
62.5°	326.4	324.0	314.5	307.4	305.0
65°	292.3	288.4	280.4	274.1	271.7
67.5°	255.9	252.7	246.4	240.8	237.7
70°	223.4	218.6	213.9	208.3	204.4
72.5°	189.3	186.2	180.6	175.9	174.3
75°	154.5	151.3	148.9	145.0	142.6
77.5°	123.6	122.0	118.8	115.7	115.7
80°	93.5	91.1	89.5	88.7	88.7
82.5°	64.2	64.2	64.2	62.6	61.8
85°	41.2	39.6	39.6	38.0	38.0
87.5°	20.6	18.2	17.4	16.6	16.6
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	19.74	21.36	20.11	21.67	21.99	19.43	21.05	19.79	21.36	21.67
	3H	21.51	22.97	21.89	23.30	23.66	21.14	22.60	21.52	22.93	23.29
	4H	22.17	23.55	22.57	23.89	24.27	21.78	23.16	22.18	23.50	23.88
	6H	22.66	23.93	23.07	24.30	24.69	22.27	23.54	22.68	23.91	24.30
	8H	22.81	24.03	23.24	24.42	24.82	22.43	23.64	22.85	24.03	24.43
	12H	22.92	24.08	23.35	24.47	24.90	22.53	23.70	22.96	24.08	24.51
4H	2H	20.32	21.70	20.72	22.04	22.42	20.07	21.45	20.47	21.80	22.17
	3H	22.31	23.47	22.72	23.86	24.26	22.01	23.16	22.42	23.56	23.96
	4H	23.10	24.14	23.53	24.55	24.99	22.77	23.81	23.20	24.23	24.66
	6H	23.72	24.63	24.17	25.07	25.52	23.38	24.29	23.84	24.73	25.19
	8H	23.92	24.77	24.38	25.21	25.68	23.59	24.44	24.05	24.88	25.35
	12H	24.07	24.84	24.55	25.31	25.78	23.74	24.51	24.22	24.98	25.45
8H	4H	23.38	24.24	23.84	24.68	25.14	23.09	23.95	23.55	24.39	24.85
	6H	24.12	24.83	24.61	25.32	25.79	23.83	24.54	24.32	25.02	25.50
	8H	24.39	25.03	24.90	25.54	26.02	24.11	24.74	24.62	25.25	25.74
	12H	24.62	25.19	25.13	25.68	26.24	24.33	24.89	24.84	25.38	25.95
12H	4H	23.41	24.18	23.89	24.65	25.12	23.13	23.90	23.61	24.37	24.84
	6H	24.17	24.81	24.68	25.31	25.80	23.89	24.53	24.40	25.03	25.52
	8H	24.50	25.07	25.01	25.56	26.12	24.23	24.79	24.73	25.28	25.84