

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: P242546

Luminaire Tested: S123RDRP-S775D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242546
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-25)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDRP-S775D930-X4F0-XX-UDD-F-W
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

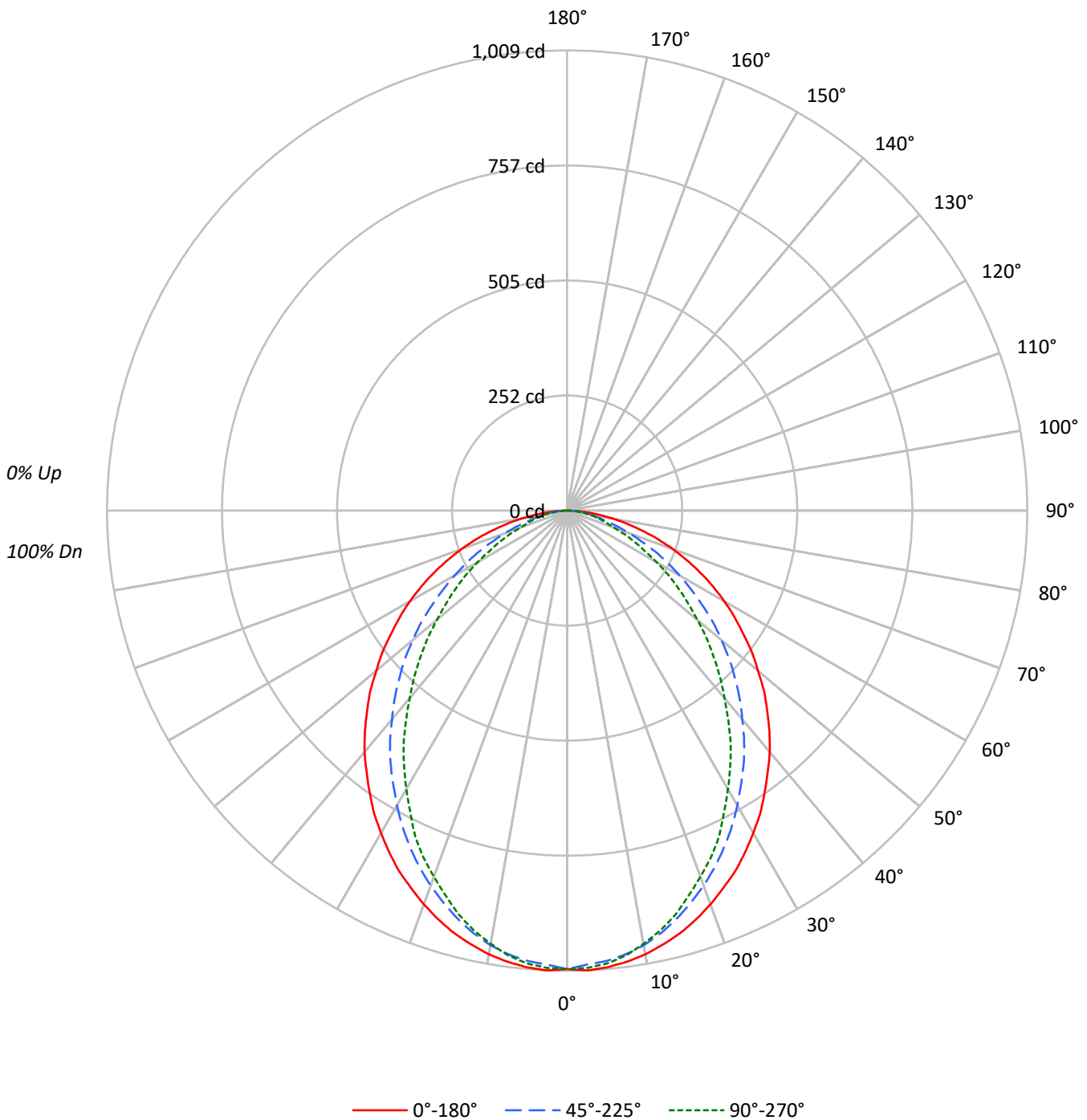
Lumens per Lamp: N/A
Luminaire Lumens: 2271.1 lumens
Efficiency: N/A
Efficacy: 86.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (A_{in}): 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				
1	110	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88	86				
2	100	93	86	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73				
3	92	82	75	68	90	81	74	68	78	72	67	75	70	66	73	68	64	62				
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56	54				
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47				
6	73	60	51	45	71	59	51	45	57	50	45	55	49	44	54	48	44	42				
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37				
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34				
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	34	29	28				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12185	12185	12185
5°	12232	12063	12132
10°	12162	11912	11871
15°	12032	11633	11510
20°	11852	11284	11021
25°	11668	10893	10544
30°	11422	10441	9870
35°	11172	9990	9253
40°	10940	9456	8489
45°	10635	8931	7798
50°	10302	8333	7026
55°	9958	7650	6306
60°	9646	6919	5515
65°	9235	6126	4724
70°	8725	5142	3813
75°	7980	4046	3587
80°	7113	3588	3302
85°	6008	3171	2948

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10635 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.5	4.2
10°-20°	262.9	11.6
20°-30°	378.5	16.7
30°-40°	426.3	18.8
40°-50°	407.7	18.0
50°-60°	333.8	14.7
60°-70°	225.0	9.9
70°-80°	112.9	5.0
80°-90°	29.5	1.3
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°	735.9	32.4
0°-40°	1162.2	51.2
0°-60°	1903.7	83.8
0°-90°	2271.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2271.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1005	1005	1005	1005	1005	
5°	1005	1001	991	999	997	95
15°	959	950	927	923	917	270
25°	872	852	814	797	788	401
35°	755	726	675	640	625	473
45°	620	584	521	474	455	479
55°	471	431	362	315	298	423
65°	322	277	214	174	165	319
75°	170	131	86	78	77	182
85°	43	25	23	21	21	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1005.3	1005.3	1005.3	1005.3	1005.3
2.5°	1009.3	1006.1	996.3	1005.3	1003.6
5°	1005.3	1001.2	991.4	998.7	997.1
7.5°	997.9	993.9	981.6	986.5	984.1
10°	988.1	982.4	967.8	968.6	964.5
12.5°	974.3	967.8	949.0	948.2	943.3
15°	958.8	949.8	927.0	922.9	917.2
17.5°	940.0	930.3	901.7	893.6	885.4
20°	918.8	905.8	874.8	864.2	854.4
22.5°	895.2	879.7	846.3	832.4	823.5
25°	872.4	852.0	814.5	797.4	788.4
27.5°	844.7	822.6	781.9	759.0	745.2
30°	816.1	791.7	746.0	718.3	705.2
32.5°	787.6	759.0	710.1	679.1	665.3
35°	755.0	725.6	675.1	640.0	625.3
37.5°	722.4	690.6	637.6	598.4	580.5
40°	691.4	655.5	597.6	555.2	536.5
42.5°	656.3	620.4	560.1	512.8	496.5
45°	620.4	583.8	521.0	474.5	454.9
47.5°	585.4	544.6	482.7	432.1	415.0
50°	546.3	507.9	441.9	391.3	372.6
52.5°	511.2	468.8	403.6	350.6	334.3
55°	471.2	431.3	362.0	314.7	298.4
57.5°	435.4	392.2	322.0	277.2	263.3
60°	397.9	353.0	285.4	241.3	227.5
62.5°	360.4	315.5	247.9	207.1	192.4
65°	322.0	277.2	213.6	173.7	164.7
67.5°	283.7	238.1	176.1	145.9	136.2
70°	246.2	202.2	145.1	116.6	107.6
72.5°	208.7	165.5	115.0	92.9	90.5
75°	170.4	131.3	86.4	78.3	76.6
77.5°	135.3	99.5	67.7	62.8	61.1
80°	101.9	68.5	51.4	48.9	47.3
82.5°	70.1	42.4	36.7	34.2	34.2
85°	43.2	25.3	22.8	21.2	21.2
87.5°	19.6	10.6	10.6	9.8	9.0
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	20.14	21.69	20.50	22.00	22.32	17.51	19.06	17.87	19.37	19.69
	3H	21.91	23.31	22.29	23.64	24.00	18.62	20.01	18.99	20.34	20.70
	4H	22.57	23.88	22.97	24.23	24.61	19.01	20.32	19.41	20.67	21.05
	6H	23.05	24.27	23.47	24.63	25.02	19.33	20.54	19.74	20.91	21.30
	8H	23.20	24.36	23.63	24.75	25.15	19.44	20.60	19.87	20.99	21.39
	12H	23.31	24.41	23.74	24.80	25.22	19.51	20.62	19.94	21.00	21.43
4H	2H	20.39	21.71	20.79	22.06	22.43	18.22	19.53	18.62	19.88	20.26
	3H	22.36	23.45	22.77	23.85	24.25	19.50	20.59	19.91	20.99	21.39
	4H	23.13	24.11	23.56	24.53	24.96	19.98	20.96	20.41	21.37	21.81
	6H	23.72	24.58	24.18	25.02	25.48	20.39	21.25	20.85	21.69	22.15
	8H	23.91	24.72	24.38	25.16	25.63	20.54	21.34	21.00	21.78	22.25
	12H	24.06	24.78	24.54	25.26	25.73	20.65	21.37	21.13	21.84	22.31
8H	4H	23.18	23.98	23.65	24.43	24.89	20.30	21.10	20.76	21.54	22.01
	6H	23.84	24.51	24.34	25.00	25.47	20.81	21.47	21.31	21.96	22.44
	8H	24.08	24.67	24.59	25.18	25.67	21.01	21.61	21.53	22.12	22.60
	12H	24.28	24.80	24.79	25.30	25.86	21.18	21.71	21.69	22.20	22.76
12H	4H	23.17	23.89	23.65	24.37	24.84	20.34	21.06	20.82	21.53	22.00
	6H	23.83	24.43	24.34	24.93	25.42	20.87	21.47	21.38	21.97	22.46
	8H	24.10	24.63	24.61	25.12	25.68	21.13	21.65	21.64	22.14	22.71