

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P931236

Luminaire Tested: DFN2DS-TR2F0-020DS927-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931236
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-TR2F0-020DS927-RLL
Description: 2 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

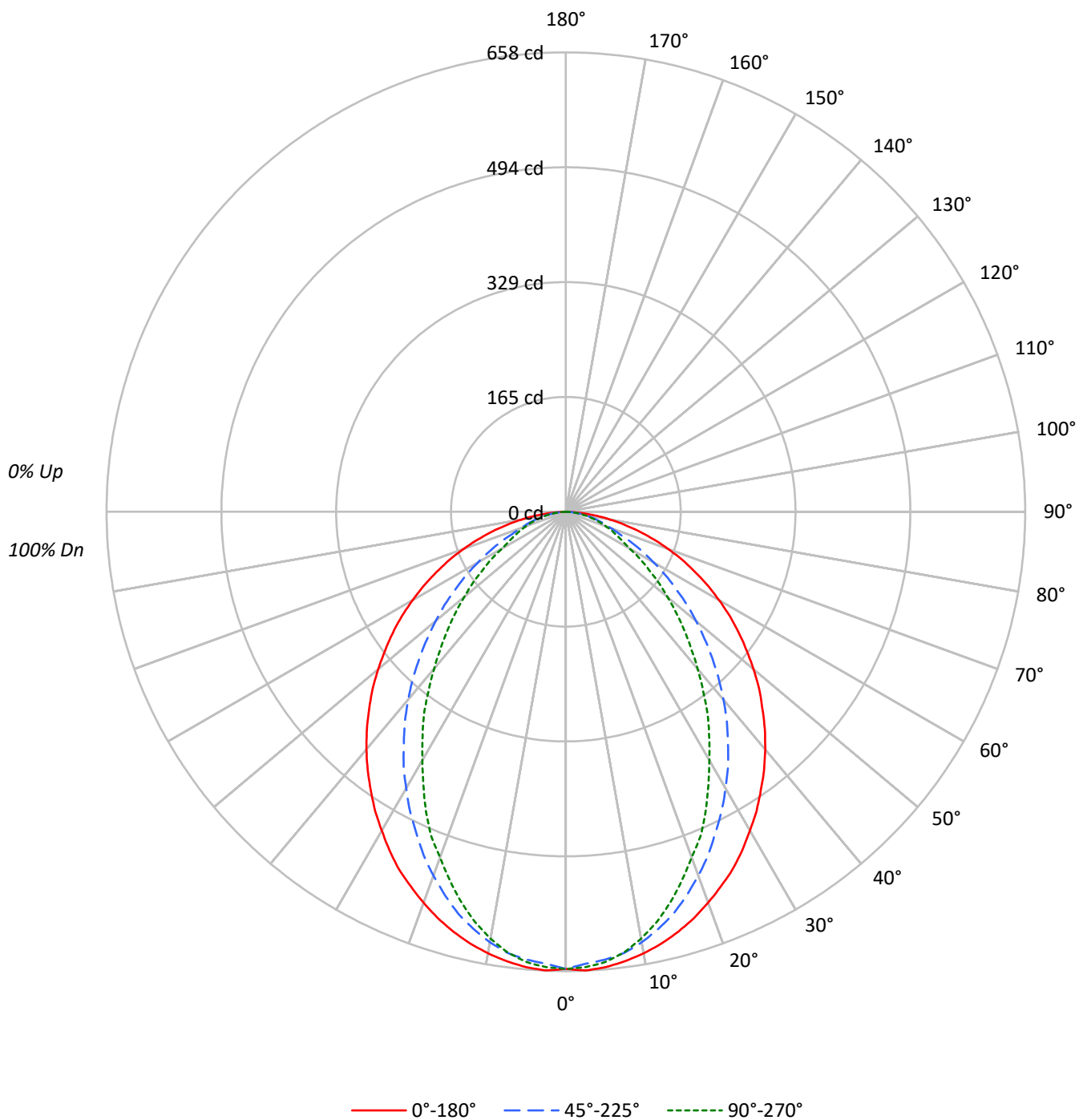
Lumens per Lamp: N/A
Luminaire Lumens: 1346.4 lumens
Efficiency: N/A
Efficacy: 76.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.36' x L: 2.04' x H: 0')
CIE Type: Direct

Input Watts (W): 17.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1460	1460	1460
5°	1466	1442	1450
10°	1454	1418	1406
15°	1438	1376	1337
20°	1415	1316	1250
25°	1391	1248	1166
30°	1358	1178	1059
35°	1326	1102	965
40°	1294	1023	855
45°	1256	935	757
50°	1217	845	660
55°	1177	749	567
60°	1131	648	471
65°	1079	544	429
70°	1016	448	394
75°	939	408	368
80°	828	365	335
85°	650	287	287

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1256 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.4	4.6
10°-20°	168.4	12.5
20°-30°	236.5	17.6
30°-40°	257.8	19.1
40°-50°	236.9	17.6
50°-60°	186.1	13.8
60°-70°	121.1	9.0
70°-80°	62.3	4.6
80°-90°	15.9	1.2
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°	466.3	34.6
0°-40°	724.0	53.8
0°-60°	1147.0	85.2
0°-90°	1346.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1346.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	655	655	655	655	655	
5°	655	652	644	649	648	62
15°	623	616	596	585	579	175
25°	565	546	507	483	474	260
35°	487	457	405	367	354	305
45°	398	358	296	254	240	307
55°	303	256	192	157	146	271
65°	204	156	103	83	81	203
75°	109	68	47	43	43	115
85°	25	13	11	11	11	31
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	654.7	654.7	654.7	654.7	654.7
2.5°	657.6	654.7	648.1	654.1	652.9
5°	654.7	651.7	644.0	649.4	647.5
7.5°	649.4	645.8	637.5	639.9	636.8
10°	642.2	638.0	626.2	624.4	620.9
12.5°	633.4	628.0	612.0	608.5	601.9
15°	622.7	616.1	596.0	584.7	578.9
17.5°	610.2	600.7	575.9	562.8	553.4
20°	596.0	584.1	554.6	539.7	526.7
22.5°	580.6	567.0	532.6	512.5	503.6
25°	565.3	546.2	507.1	482.9	473.9
27.5°	546.9	526.7	483.4	455.6	441.9
30°	527.3	504.7	457.4	427.2	411.1
32.5°	508.3	481.1	432.5	397.0	382.1
35°	487.0	456.8	404.7	367.3	354.3
37.5°	466.3	433.6	378.6	337.7	322.9
40°	444.3	408.8	351.3	309.3	293.8
42.5°	421.8	384.0	324.1	280.2	265.5
45°	398.1	358.4	296.3	254.2	239.9
47.5°	375.6	333.6	269.6	227.5	214.5
50°	350.8	308.7	243.5	202.6	190.2
52.5°	326.4	282.0	218.6	179.5	168.3
55°	302.7	256.5	192.5	157.1	145.7
57.5°	278.5	231.0	169.5	136.3	126.8
60°	253.6	206.2	145.2	115.0	105.5
62.5°	229.3	181.9	124.4	96.0	91.2
65°	204.4	156.4	103.1	83.0	81.2
67.5°	180.7	132.7	83.0	72.9	71.1
70°	155.8	109.6	68.7	62.8	60.4
72.5°	132.1	88.2	57.4	52.7	51.6
75°	109.0	67.5	47.4	43.2	42.7
77.5°	85.9	48.0	37.3	34.9	33.7
80°	64.5	34.4	28.4	26.1	26.1
82.5°	45.0	23.1	19.6	18.4	18.4
85°	25.4	13.0	11.2	11.2	11.2
87.5°	9.5	4.8	4.8	4.1	4.1
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	12.55	14.07	12.91	14.38	14.70	8.51	10.03	8.88	10.35	10.66
	3H	14.31	15.68	14.69	16.01	16.37	9.78	11.14	10.15	11.47	11.83
	4H	14.98	16.26	15.38	16.61	16.99	10.28	11.56	10.68	11.91	12.29
	6H	15.47	16.65	15.88	17.02	17.41	10.66	11.84	11.07	12.21	12.60
	8H	15.63	16.76	16.06	17.15	17.55	10.78	11.91	11.21	12.30	12.70
	12H	15.74	16.82	16.17	17.20	17.63	10.86	11.94	11.30	12.32	12.75
4H	2H	12.65	13.93	13.05	14.28	14.66	9.21	10.49	9.61	10.84	11.21
	3H	14.59	15.65	15.00	16.05	16.45	10.65	11.71	11.06	12.11	12.51
	4H	15.34	16.29	15.77	16.71	17.15	11.25	12.21	11.68	12.62	13.06
	6H	15.93	16.76	16.38	17.20	17.66	11.74	12.57	12.19	13.01	13.47
	8H	16.14	16.92	16.61	17.36	17.83	11.90	12.68	12.36	13.12	13.59
	12H	16.29	16.99	16.78	17.47	17.94	12.02	12.71	12.50	13.19	13.66
8H	4H	15.36	16.14	15.82	16.58	17.05	11.60	12.38	12.07	12.82	13.29
	6H	16.00	16.64	16.49	17.13	17.61	12.19	12.83	12.69	13.32	13.80
	8H	16.25	16.82	16.76	17.33	17.82	12.41	12.99	12.92	13.50	13.98
	12H	16.45	16.96	16.96	17.45	18.02	12.59	13.10	13.10	13.59	14.16
12H	4H	15.34	16.04	15.83	16.52	16.99	11.65	12.34	12.13	12.82	13.29
	6H	15.98	16.56	16.49	17.07	17.55	12.25	12.83	12.77	13.34	13.83
	8H	16.26	16.77	16.77	17.26	17.83	12.53	13.04	13.04	13.53	14.09