

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: P930810

Luminaire Tested: DFN2DS-SQ2F0-030DS940-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930810
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-SQ2F0-030DS940-RLL
Description: 2 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

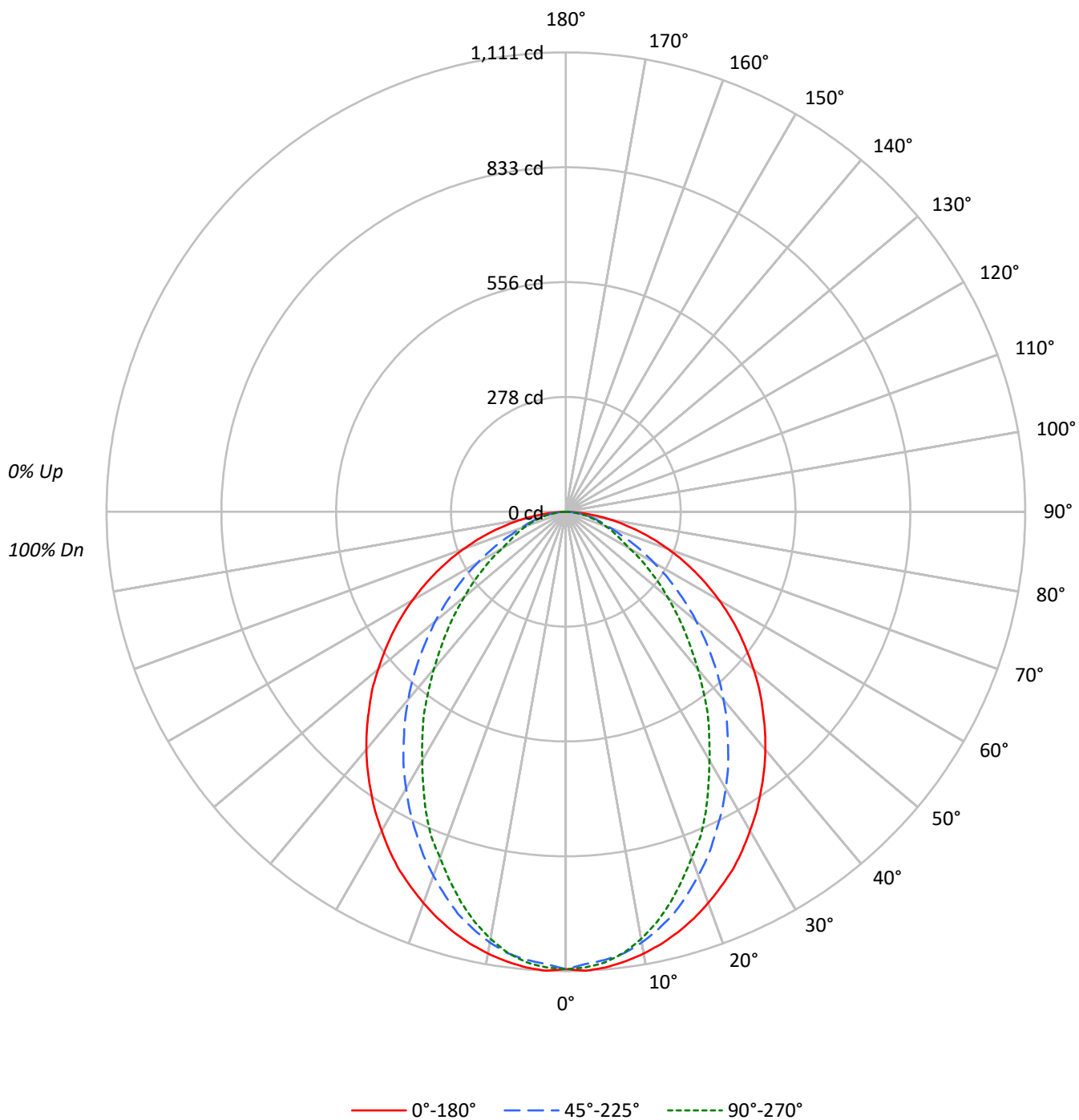
Lumens per Lamp: N/A
Luminaire Lumens: 2274.6 lumens
Efficiency: N/A
Efficacy: 85.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

Input Watts (W): 26.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9963
Total Harmonic Distortion (THDi): 0.065
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				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	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92	90	88		86
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82	79	76		74
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74	69	66		64
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66	62	57		55
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60	55	51		49
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55	50	45		43
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51	45	41		39
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47	41	37		35
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44	38	34		32
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41	35	31		29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2432	2432	2432
5°	2441	2402	2415
10°	2422	2362	2342
15°	2395	2292	2226
20°	2356	2192	2082
25°	2317	2079	1943
30°	2262	1962	1764
35°	2209	1835	1607
40°	2155	1704	1425
45°	2092	1556	1260
50°	2027	1407	1099
55°	1961	1247	944
60°	1884	1078	784
65°	1797	906	713
70°	1692	746	656
75°	1564	681	613
80°	1382	608	558
85°	1085	479	479

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2092 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.7	4.6
10°-20°	284.6	12.5
20°-30°	399.5	17.6
30°-40°	435.5	19.1
40°-50°	400.3	17.6
50°-60°	314.3	13.8
60°-70°	204.6	9.0
70°-80°	105.3	4.6
80°-90°	26.9	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°	787.7	34.6
0°-40°	1223.2	53.8
0°-60°	1937.8	85.2
0°-90°	2274.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2274.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1106	1106	1106	1106	1106	
5°	1106	1101	1088	1097	1094	105
15°	1052	1041	1007	988	978	296
25°	955	923	857	816	801	439
35°	823	772	684	621	598	515
45°	673	606	500	429	405	519
55°	511	433	325	265	246	457
65°	345	264	174	140	137	342
75°	184	114	80	73	72	195
85°	43	22	19	19	19	52
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1106.0	1106.0	1106.0	1106.0	1106.0
2.5°	1111.0	1106.0	1094.9	1105.0	1103.0
5°	1106.0	1101.0	1088.0	1097.0	1093.9
7.5°	1097.0	1091.0	1077.0	1080.9	1075.9
10°	1084.9	1078.0	1058.0	1054.9	1049.0
12.5°	1070.0	1060.9	1033.9	1027.9	1016.9
15°	1051.9	1040.9	1006.9	987.9	977.9
17.5°	1030.9	1014.9	972.8	950.9	934.8
20°	1006.9	986.8	936.8	911.9	889.8
22.5°	980.9	957.8	899.8	865.8	850.8
25°	954.9	922.8	856.8	815.7	800.7
27.5°	923.8	889.8	816.7	769.7	746.6
30°	890.8	852.8	772.7	721.7	694.6
32.5°	858.7	812.7	730.7	670.6	645.5
35°	822.8	771.7	683.6	620.6	598.5
37.5°	787.7	732.6	639.6	570.4	545.5
40°	750.7	690.7	593.5	522.4	496.5
42.5°	712.6	648.7	547.5	473.4	448.4
45°	672.7	605.5	500.5	429.3	405.3
47.5°	634.6	563.6	455.5	384.3	362.3
50°	592.6	521.5	411.4	342.3	321.3
52.5°	551.4	476.4	369.4	303.3	284.3
55°	511.4	433.3	325.2	265.3	246.3
57.5°	470.4	390.3	286.3	230.2	214.2
60°	428.3	348.3	245.2	194.2	178.2
62.5°	387.4	307.3	210.2	162.2	154.2
65°	345.3	264.2	174.1	140.1	137.1
67.5°	305.3	224.2	140.1	123.1	120.1
70°	263.2	185.2	116.0	106.1	102.0
72.5°	223.2	149.1	97.0	89.1	87.1
75°	184.1	114.1	80.1	73.1	72.1
77.5°	145.1	81.0	63.1	59.1	57.0
80°	109.1	58.1	48.0	44.1	44.1
82.5°	76.0	39.1	33.0	31.0	31.0
85°	43.0	21.9	19.0	19.0	19.0
87.5°	16.1	7.9	7.9	7.0	7.0
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	14.32	15.84	14.69	16.16	16.47	10.28	11.80	10.65	12.12	12.43
	3H	16.09	17.45	16.46	17.78	18.14	11.55	12.91	11.93	13.24	13.60
	4H	16.75	18.03	17.15	18.38	18.76	12.05	13.33	12.45	13.68	14.06
	6H	17.24	18.43	17.65	18.79	19.18	12.43	13.61	12.84	13.98	14.37
	8H	17.41	18.53	17.83	18.92	19.32	12.56	13.68	12.98	14.07	14.47
	12H	17.51	18.59	17.94	18.97	19.40	12.64	13.71	13.07	14.10	14.53
4H	2H	14.43	15.71	14.83	16.05	16.43	10.98	12.26	11.38	12.61	12.99
	3H	16.36	17.42	16.77	17.82	18.22	12.42	13.48	12.83	13.88	14.28
	4H	17.11	18.07	17.54	18.48	18.92	13.02	13.98	13.45	14.39	14.83
	6H	17.70	18.53	18.16	18.97	19.43	13.51	14.34	13.97	14.78	15.24
	8H	17.91	18.69	18.38	19.14	19.60	13.67	14.45	14.13	14.89	15.36
	12H	18.07	18.76	18.55	19.24	19.71	13.79	14.48	14.27	14.96	15.43
8H	4H	17.13	17.91	17.60	18.35	18.82	13.37	14.15	13.84	14.60	15.06
	6H	17.77	18.41	18.27	18.90	19.38	13.96	14.60	14.46	15.10	15.57
	8H	18.02	18.60	18.53	19.11	19.60	14.18	14.76	14.70	15.27	15.76
	12H	18.22	18.73	18.73	19.23	19.79	14.36	14.87	14.87	15.36	15.93
12H	4H	17.12	17.81	17.60	18.29	18.76	13.42	14.11	13.90	14.59	15.06
	6H	17.75	18.33	18.26	18.84	19.33	14.03	14.60	14.54	15.11	15.60
	8H	18.04	18.55	18.55	19.04	19.60	14.30	14.81	14.81	15.30	15.86

END OF REPORT