

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: P930913

Luminaire Tested: DFN2DS-SQ3F0-040DS930-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930913
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-SQ3F0-040DS930-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

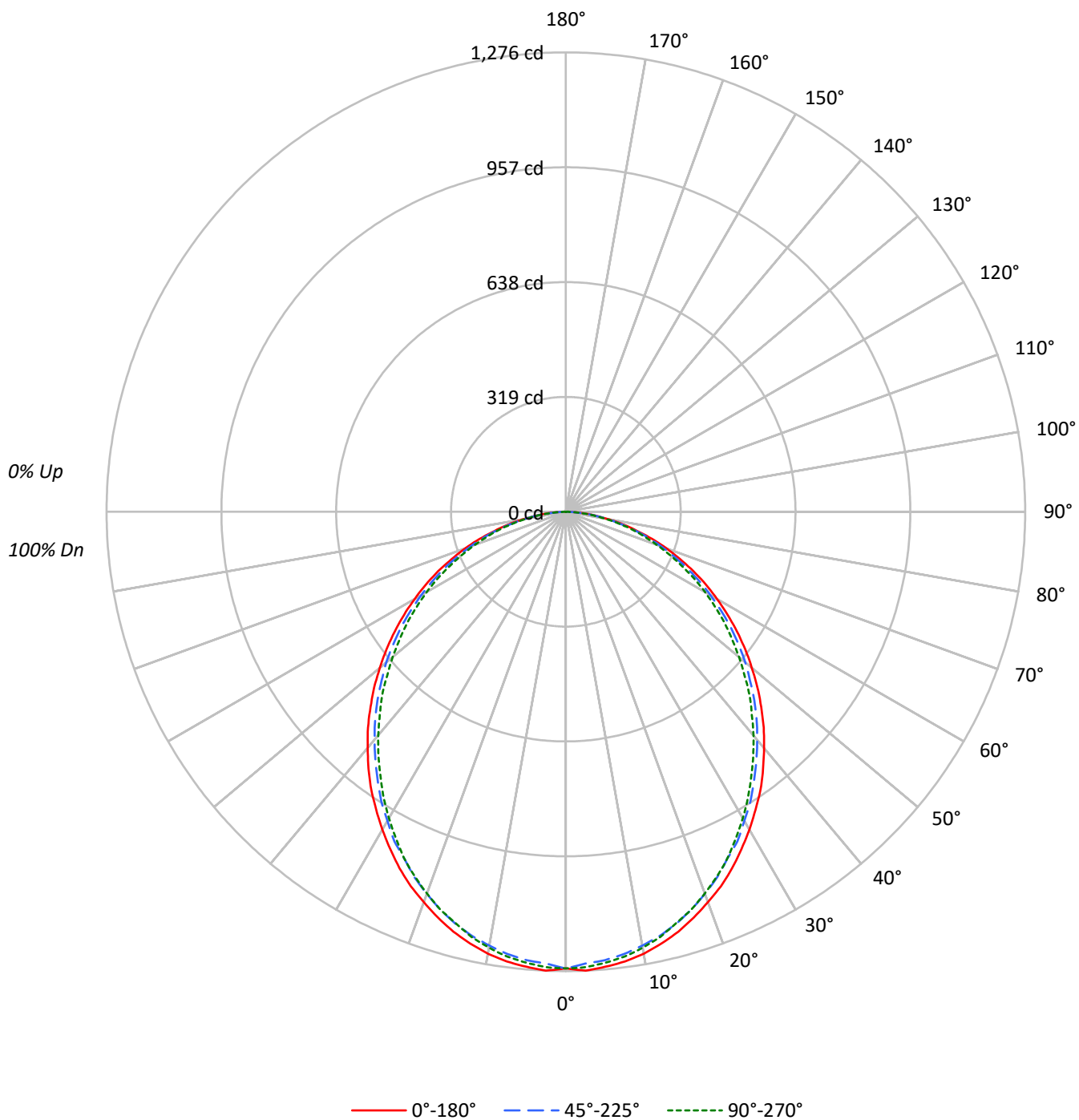
Lumens per Lamp: N/A
Luminaire Lumens: 3227.4 lumens
Efficiency: N/A
Efficacy: 84.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 38.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9933
Total Harmonic Distortion (THDi): 0.066
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	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1453	1453	1453
5°	1459	1438	1446
10°	1450	1424	1430
15°	1432	1405	1404
20°	1407	1377	1376
25°	1382	1343	1343
30°	1349	1312	1301
35°	1319	1275	1256
40°	1281	1237	1213
45°	1243	1200	1170
50°	1202	1161	1120
55°	1160	1116	1075
60°	1112	1062	1023
65°	1062	1009	962
70°	997	944	899
75°	907	869	848
80°	805	781	740
85°	657	626	561

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1243 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.4	3.7
10°-20°	335.9	10.4
20°-30°	493.7	15.3
30°-40°	573.4	17.8
40°-50°	572.7	17.7
50°-60°	499.3	15.5
60°-70°	369.1	11.4
70°-80°	208.8	6.5
80°-90°	55.1	1.7
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°	949.0	29.4
0°-40°	1522.3	47.2
0°-60°	2594.3	80.4
0°-90°	3227.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3227.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1268	1268	1268	1268	1268	
5°	1268	1264	1250	1260	1258	120
15°	1208	1200	1184	1189	1183	340
25°	1093	1083	1062	1065	1062	503
35°	943	931	911	904	898	589
45°	767	759	740	727	722	592
55°	581	573	559	544	538	519
65°	392	384	372	361	355	387
75°	205	202	196	189	192	219
85°	50	49	48	44	43	59
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1268.5	1268.5	1268.5	1268.5	1268.5
2.5°	1275.9	1269.8	1256.3	1268.5	1266.2
5°	1268.5	1263.7	1250.2	1259.9	1257.6
7.5°	1259.9	1252.7	1239.2	1249.1	1246.6
10°	1246.6	1238.1	1223.5	1233.2	1229.5
12.5°	1228.2	1221.0	1206.4	1212.5	1209.9
15°	1207.5	1200.3	1184.4	1189.2	1183.2
17.5°	1181.9	1174.7	1158.8	1164.8	1158.8
20°	1153.8	1146.5	1129.5	1133.1	1128.4
22.5°	1125.8	1114.8	1098.9	1098.9	1096.5
25°	1092.8	1083.1	1062.4	1064.8	1062.4
27.5°	1056.2	1047.7	1032.0	1028.3	1022.3
30°	1019.7	1009.9	991.7	988.0	983.1
32.5°	980.7	973.4	953.9	946.5	941.6
35°	942.9	930.7	911.2	903.8	897.7
37.5°	900.2	889.2	869.6	861.1	855.0
40°	856.3	846.5	826.9	816.1	811.2
42.5°	813.6	803.8	784.4	772.0	764.8
45°	767.2	758.8	740.3	727.1	722.1
47.5°	722.1	713.5	694.1	680.6	673.4
50°	674.5	668.4	651.3	634.2	628.1
52.5°	628.1	619.6	603.8	590.4	581.8
55°	580.7	573.3	558.7	544.0	538.0
57.5°	533.0	527.0	511.0	496.4	491.5
60°	485.4	480.6	463.6	450.1	446.5
62.5°	439.1	430.6	418.4	406.2	401.3
65°	391.6	384.2	372.0	361.0	355.0
67.5°	342.8	336.6	325.8	317.2	312.3
70°	297.6	292.7	281.7	273.2	268.4
72.5°	251.3	246.4	240.3	231.8	228.1
75°	204.9	202.5	196.3	189.1	191.5
77.5°	163.4	158.5	156.1	152.4	148.8
80°	122.0	120.7	118.3	114.7	112.2
82.5°	83.0	83.0	81.8	76.9	76.9
85°	50.0	48.8	47.6	43.8	42.7
87.5°	22.0	19.6	17.1	13.4	12.1
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	12.58	14.19	12.95	14.51	14.82	12.14	13.75	12.50	14.06	14.38
	3H	14.33	15.79	14.71	16.11	16.47	13.84	15.30	14.22	15.62	15.98
	4H	14.98	16.35	15.38	16.70	17.07	14.48	15.85	14.88	16.20	16.58
	6H	15.45	16.72	15.86	17.08	17.47	14.95	16.21	15.36	16.58	16.97
	8H	15.59	16.80	16.01	17.19	17.59	15.09	16.30	15.51	16.69	17.09
	12H	15.68	16.84	16.11	17.22	17.65	15.17	16.33	15.60	16.71	17.14
4H	2H	13.14	14.51	13.54	14.86	15.24	12.79	14.16	13.19	14.51	14.88
	3H	15.12	16.26	15.53	16.66	17.06	14.71	15.86	15.12	16.25	16.65
	4H	15.89	16.93	16.32	17.34	17.78	15.47	16.51	15.90	16.92	17.36
	6H	16.49	17.39	16.94	17.84	18.29	16.06	16.96	16.51	17.40	17.86
	8H	16.68	17.53	17.14	17.97	18.43	16.24	17.09	16.70	17.53	18.00
	12H	16.81	17.57	17.29	18.05	18.52	16.36	17.12	16.84	17.60	18.06
8H	4H	16.17	17.01	16.63	17.46	17.92	15.79	16.64	16.25	17.08	17.55
	6H	16.88	17.58	17.37	18.07	18.55	16.50	17.20	16.99	17.69	18.17
	8H	17.14	17.77	17.65	18.28	18.76	16.75	17.38	17.26	17.89	18.37
	12H	17.34	17.90	17.85	18.39	18.95	16.93	17.49	17.43	17.98	18.54
12H	4H	16.19	16.95	16.67	17.43	17.90	15.83	16.59	16.31	17.06	17.53
	6H	16.93	17.56	17.44	18.07	18.55	16.56	17.19	17.07	17.70	18.18
	8H	17.24	17.80	17.75	18.29	18.85	16.86	17.42	17.37	17.91	18.47